

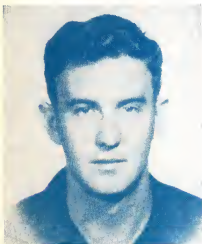
OTHER WORLDS

JULY
1953
35¢



THE GAME OF WHITE James McConnell

The People Who Make **OTHER WORLDS**



No. 15

JAMES McCONNELL

WHAT shall I tell you about McConnell? That he is 27, 6' 2" tall, 185, resisting his bachelorhood less and less each year? Nope, that sounds too trite. So shall I tell you that he should get his Ph.D. in psychology about a year from now and hopes to use this to support him while he writes s-f? Shall I mention that he began writing s-f solely because his good friend Chad Oliver was making such a success in the field that McConnell got jealous? Should I say that he's been writing in other fields for years, having worked on two of the largest newspapers in Louisiana, that he was in radio professionally for about four years ending up as a program director of KGBC in Galveston, Texas? That he deserted

radio for television, becoming head writer at WLW-TV in Cincinnati for about a year, and that while there a series of educational radio scripts he wrote won a national award and that he helped write the first network TV shows to emanate from Cincinnati (over NBC-TV)? That he left the ulcer mill of television on his own accord to take over the family business and then gravitated back to school for another degree? That he is a passable actor and that Shelley Winters once advised him to go to Hollywood where she'd do her best to help him get a break in the film capital?

No, most of the above is either superfluous or bragging, and I don't

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William T. Powers

L. Sprague de Camp

....Editorial....

THIS will probably be one of the longest editorials I have ever written; but that will be because I have so much to say that must be said rightly.

During the Labor Day holidays, in 1952, I attended the Tenth Annual World Science Fiction Convention in Chicago, at which Hugo Gernsback, the father of science fiction, was guest of honor. The whole affair turned out to be a sort of father-and-son thing, because before it wound up, they'd given me the title of son of science fiction. Both of us were given a bronze plaque to commemorate the occasion. More than a thousand science fiction fans stopped the show with applause that lasted for long minutes in a deafening uproar when Hugo Gernsback was given his plaque; and there was a scattering of hand-clapping when I got mine. I mention this so that you will place my forthcoming remarks in the proper category of importance, as related to the remarks of Mr. Gernsback, given both in his speech at the convention, and in the second issue of his new magazine, *Science-Fiction Plus*. But, as the figurative son of a great father, I feel that I must live up to the reputation given me, and at least make it a family affair, and respond to his remarks and opinions by giving my own, for the record.

For that's where Hugo Gernsback has put his—on the record.

Briefly, Mr. Gernsback gave the convention, and now his readers, a definition of science fiction. His magazine, he tells us, is science fiction as he defines it, and he defines all the rest of the magazines now called by that name as *pseudo* science fiction. He qualifies his words with positive definitions, which we'll quote: Science fiction, says Mr. Gernsback, is *imaginative extrapolation of true natural phenomena, existing now, or likely to exist in the future*. He goes on to say that good science fiction must be based on true science—science as interpreted and understood by responsible scientists. In other words, the story should be within the realm of the possible. Mr. Gernsback feels that the science content of a story should be reasonably accurate and if not, it just isn't fulfilling its mission. He feels also that science fiction readers want to be informed, not misinformed. As an example, he tells of the author who describes an atomic bomb explosion on the Moon being heard on Earth (which is impossible, because sound cannot traverse the vacuum between the two worlds). This, he says, is *pseudo* science. Obviously Mr. Gernsback feels very strongly about this condition, which

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EDITORS

Ray Palmer

Bea Mahaffey

ART DIRECTOR

Malcolm H. Smith

Front Cover:

Robert Gibson Jones
(The Game of White)

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The Game of White

By James McConnell

There were many players in the game, but there could
be only one winner — so the Machine had ordained.
Ronart had to win, which meant Cathy must lose!

Illustrated by Lawrence

It was not until several years after the end of the Final War that Mankind realized the truth: that although the atomic dust had not destroyed Man's mechanical civilization, leaving it intact for the winner, it had destroyed the basic strength of the race. Fearful indeed was the realization that even in the rare cases where the male of the species proved to have retained some measure of his fertility, reproduction became impossible through inability of the female to complete the process of birth and carry the foetus to maturity. True to the predictions of scientists, who had carefully computed the total effect of the radiations from the deadly dust, Man had not become completely sterile; but unforeseen by them, he had become too weakened to survive. He was not sterile, but neither was he virile. In desperation the scientists sought for an answer, and they worked what they hoped was a miracle. Whether it was to be or not, only time could tell. And the years went on. . . .

(Excerpt from "Man's Last Battle" by
Septus Eubius. A.D. 2034)



RONART lay on his bed, listening. The Machine was talking again. Not through the loudspeakers, as it did to everybody, but talking personally, quietly, to him alone.

The Machine talked through the walls, through the air in his cubicle that changed itself automatically each minute, through the floors and the ceiling. The metal all around him undulated softly, setting up a throbbing susurrance. The bed rocked his body gently, adding its whisper to the murmuring. The Machine was calling.

"In a moment it will be too much," he thought, darkly, as he tensed his body against the rippling-ness of the bed. "I'll get up. I'll have to get up and press the button . . . and start the game."

For a moment he thought of flight. But then he dismissed those thoughts. It would be no use to go elsewhere in the Machine, to look for escape in another compartment. For the Machine would talk to him anywhere—it's hollow voice would follow him down the corridors and into the public rooms. You could not hide from the Machine *inside* the Machine.

And you could not leave, unless you won the game.

Ronart relaxed his body, for the moment letting it mingle with the pulsation of the Machine. He and the metal became as one.

"It is time, Ronart," it seemed to say, the voice pounding within him. "Now . . . come now . . . come play the game with me."

Twice in the past, he had lain on

this very bed and listened to the changeless challenge. And twice before he had refused, pitting the strength of his fear against the hypnotic call of the Machine.

But this time, he knew, his strength and his fears would be too small to match the demanding, insistent summons. Twice spared . . .

A BELL rang outside his room, announcing the mid-cycle meal. Automatically Ronart raised himself to a sitting position, swinging his legs around, his feet onto the floor. The bed yielded to the change of his body but continued its gentle rocking. Ed-dies of warm air brushed past his ears, caressing them, adding a windy, rustling undertone to the multitude of voices.

"I'll get up," Ronart said aloud to hide the other voices. "I'll go down to the food room and find Cathy and we'll talk. We'll eat and talk and it will go away. I won't have to listen to it if I'm talking to Cathy."

For it was the unknown that made him afraid. The fear of losing, the fear of what would happen if he didn't win the game. There were tales, fables, mythological conjurings about where you went, what they did to you, and the great pain that came to you out of darkness if you lost.

But it was all conjecture. Nobody knew for sure, for nobody ever came back from the games. Thousands played the game with the Machine each time, and only one could win. Yet nobody ever came back. Only guesses and vague rumors returned to

fill the empty places at the food tables each time a game was started. And sometimes, they said, quite often in fact, nobody won at all.

The Machine spoke through the light filtering down from the ceiling of his room, a sibilant, many-tongued voice that *penetrated* . . .

"Do not be afraid, Ronart. Fear is not in the game. The game is good and you can win. Come, Ronart, it is safe. Come, now, and play the game with me."

Ronart stood up. The metal floor gave rhythmically under his weight, shifting, rearranging itself in pattern with the call.

"All I've got to do," Ronart said as the pressure within him became unbearable, "is to walk over to the wall, put my identity card in the slot and press the button. Then the voice will stop."

As he spoke the turbulent voices mounted in crescendo, immobilizing him with their puissant demand. He stood there, staring at the red button on the wall opposite him, the floor dancing under his feet. The button blurred, then snapped back into focus. It seemed so near, so close to him. It seemed so easy a thing to do, to stop the voices. Twice feared, twice spared, and now . . .

"If you please, the mid-cycle meal is now being served in the food room." The automatic voice from the loudspeaker on the wall sliced across his reverie. "There is time yet to partake if you leave at once. If you please, the mid-cycle meal is now being served . . ."

The spell was shattered. Turning, Ronart strode across the room, opened the door and went into the corridor.

THE hall was long and empty. On both sides were unnumbered doors opening off to other small bedrooms such as the one Ronart had just left. Hundreds and hundreds of rooms on each of the lower levels of the Machine.

Ronart paused for a second at the top of the "down" escalator, surveying the large hall below. This was the recreation room for his group. It was empty now, but soon it would be filled. The comfortable chairs would be stuffed with gossiping people, spending a leisurely hour or two after the mid-cycle meal.

Grasping the guard-rail, Ronart stepped onto the escalator. As he rode down, it altered its metallic whine slightly and began singing to him in the voice of the Machine. At the bottom he hurried away from it, trying to drown out the sound of it with the clatter of his footsteps.

The hum of conversation reached his ears long before he got to the food room. Once inside, Ronart looked around until he saw Cathy sitting at a table against the wall, saving a seat for him. As he sat down beside her, she slipped one of her hands around one of his.

"It is late, Ronart, very late for you," she said, her voice soft and warm.

He looked at her. She was smiling now, but he could tell that she had

been crying.

"Yes, Cathy, it is late for me," he answered. She seemed to know without his telling her that the Machine had been calling again.

The food was served just then, and neither of them spoke for a while. They ate slowly, looking up at each other over almost every morsel.

Finally she said, "I knew a game was about to start. There were so many empty chairs here today. So many empty places . . ." Ronart looked around him. Saon was missing, as were Cheryl, Tanon, Elspeth, Renald and Laurence. It was like this all over the Machine when a game was about to begin.

"I was afraid that you had started the game without telling me, without coming to say goodbye," she went on, almost in tears again.

There was nothing he could say. When the Machine called, you went, and nothing else mattered. That was the rule. Relationships, *all* relationships changed. The very pattern of life was structured around the call of the Machine.

Ronart sighed and slumped down into his chair. The drowsy hum of voices lulled his sense of fear for the moment. He stared down at the table, his body comfortable in the plushness of the seat. And then the back of the chair began to tingle ever so slightly. The cushion under him began to flow, as if it had suddenly turned to water. A flowing, tingling chorus, reminding him, calling to him, beckoning . . .

Suddenly Ronart stood up. "Let's

go up to my room, Cathy. It's almost worse here than there, and at least we can be alone in the room."

"Is it that bad, Ronart?"

"Someday, perhaps, you'll know."

She stretched out her hand to him, and taking it, he pulled her up to him. They left the food room arm in arm. Other than their friends, no one bothered to watch them as they departed.

THERE were no chairs in the room, so Ronart motioned Cathy to sit on the bed while he paced around the narrow confines of his quarters. Cathy followed his movements with her eyes.

"Where do we come from, Cathy?" he said finally.

"I don't know. From the Machine, I guess."

Ronart stopped his pacing and turned to look at her. "Yes, that's just it. Nobody knows. The first thing I remember is waking up one cycle, here in this room."

"But that's the way it happens to everybody, Ronart."

He started moving again. "Nobody told us anything. There wasn't anybody around *to* tell us anything. All we knew was that we were here, that there were hundreds of thousands of others like us here, and that there was the Machine . . ."

"Come sit down beside me, Ronart," she told him, smiling. "It won't seem too bad if you're close to me."

He paused again and looked first at her and then at the bed. It seemed quivering, waiting for him. As long

as he walked and talked the Machine seemed quiet.

"Please, Ronart."

He walked over to the bed and lay down, resting his head in her lap, looking up at her warm and comforting face. She let her fingers run through his hair.

"Now, then," she said soothingly. "It's much better like this, isn't it?"

His body relaxed to the comfort of her nearness, but his mind refused to be lulled by her presence. "Cathy," he said, "Where does it all lead? Why are we here?"

"To play the game, of course, silly. What else can there be?"

He sat up quickly. "But, Cathy, what if either one of us should lose? What if *both* of us should lose? What happens to you when you lose? Where do you go, how do we know that we'd ever see each other again? It's so unfair!"

She put an arm up around his shoulders and pulled his head down to her lap again and resumed caressing his hair. "I don't know what happens if you lose, Ronart. 'The Plunge,' I guess, and then somebody new to take your place in the food room, as always."

As he looked up at her, something welled up inside him—a longing to take her in his arms, to hold her close to him, hold her and keep her there forever. An unspeakable desire to make her a part of him, as he was a part of the Machine. An unknowable passion, a drive, yearning, an overwhelming tropism . . .

But what was it? How to give it

vent? Into what words or actions could he express this aching desire? There were so many things he didn't know, so many things that had been left untaught.

Cathy must have felt it too, for her body gave a little shudder. She took her hand away from his hair. "I . . . I don't feel well, Ronart. I think I had better go."

Before he could protest she moved his head from her lap and stood up. He wanted suddenly to reach up, pull her back to him. But in his seething frustration he could only lie there on the bed, looking at her.

"I wish there were something else, some other way it could be done than by playing the game," she told him. "I wish there were some words to tell you how I feel."

She leaned down over him, her face close to his. Something salty touched his lips and he knew that she was crying. He started to throw his arms up around her when, with a supple motion, she stood up again and walked to the door. She paused at the doorway for a moment and looked back at him.

"Good luck, Ronart." And she was gone.

FOR a while after Cathy left, Ronart lay on his bed. The sudden emptiness of the room closed in on him. The salt of her tears lingered on his lips, reminding him of their parting.

And then, slowly, he became aware that the empty feeling was ebbing away, being replaced by a closeness

of some other kind. The lights dimmed softly and the voice of the Machine returned to him. For the moment he refused to listen to it, until the pounding sibilance became too great to ignore.

"Do not think me unkind, my child, nor unfair. In a short while you will understand. It will be explained, all of this you trouble with, and you will understand. I am waiting, Ronart, waiting for you. I am patient, but I am waiting. So come, Ronart, come now and play the game with me, and you shall know . . ."

It had a mesmeric quality to it that robbed him of his reason and his fears. Over and over, again and again, it repeated its enigmatic call, lulling him, leading him, luring him . . .

"I am waiting, my child, waiting. You cannot resist me for long, and while you resist, you feel pain. Give yourself to me, Ronart, and all will be well. Play the game and you shall know . . ."

The voice pulled him upright and then out of the bed onto his feet. He had no mind of his own; he only thought the thoughts of the Machine. The room swam in a sea of mist. The only thing in sharp focus was the button on the opposite wall.

His mind seemed out of contact with reality. He felt as if something had pushed him outside himself.

One step, and then another. One foot lifted from the floor and placed in front of him, a hideous, unthinking motion that took him across the weaving floor.

And then he was before it.

A hand fumbled for his identity card, which slipped easily into the narrow slot beside the button. Ronart felt like a marionette, a puppet. Surely someone else was running his body, performing all these tasks for him. It seemed incredible and incredibly horrible to him, but he was powerless to do anything but watch.

"Go ahead, Ronart. Now it is time. Soon you shall know. Press the button, Ronart. Give the signal, and let us play the game."

In blind obedience, one arm raised up, the hand groping for the indicator, anxious. Aching fingers that did not belong to him felt the wall in front of him, searching out the switch. And then they found it.

Ronart screamed with animal-like release of passion at the raging conflict inside him—and then he pressed the button.

The game was on!

THE room was suddenly quiet. Ronart found himself, exhausted, leaning against the wall for support, the voices within him, the shrill hurricane of conflict silent at last. He stayed in this position for a minute or two to gain strength. It was done now . . .

A swift hiss of escaping air sounded behind him. Turning around he saw a panel slide over the door to the corridor. Walking over to it, he found it was locked, automatically, from the outside. He was confined to his room until the beginning of the game.

There was a rumble of static from the loudspeaker on the wall. Ronart

turned to it, and the voice of the Machine came over it clearly:

"Thank you, my child, for what you have done. I have been waiting for you to signal."

Now that the decision had been made, now that he was committed and there was no turning back, Ronart felt the beginnings of fear return.

"You have been entered in the Game of White. There are many, many others like you, all of them my children, who have entered or will enter the Game of White.

"The playing will commence at the beginning of the next cycle. All questions will be answered during the game itself. Any further communication between you and anyone else is out of the question until the end of the Game, or until you are disqualified.

"Until that time, until next cycle, you will be confined to this room. You will need all your strength for the game. I suggest that you spend the intervening time in sleep. A special bell will sound to awaken you, and a way will be opened to lead you to the playing grounds.

"In parting, I wish to all of you, to each of my children, the best of luck. Sleep now, for next cycle we begin the Game of White."

For minutes after the loudspeaker went dead Ronart stood staring at it. Then he sat down on the bed.

Sleep? It seemed out of the question. There were too many things to be thought about, too much to be said to himself. He stretched out on the bed, then drew his knees up against

his chest, his hands covering his face. But he did not sleep.

CYCLE I

THE bell sounded sharply. Ronart heard it but did not move. The lights, which had been dim ever since he started the game, came up now to full brilliance. Still he did not change his position on the bed. Then again he heard a rapid rush of compressed air freeing itself. He turned over.

A section of the wall by the red button had swung open, revealing a partially lit corridor where before had been only smooth metal. He could see a dim light some distance down the hall.

Methodically he got up and checked the other door. It still had the double lock on it. There was no other exit. He could either go down this new passageway, or he could stay in the room. Those were his only choices.

"The Game of White has begun." The voice of the Machine was a sudden shock. "You will leave your room at once and proceed down the corridor opened to you. At the end you will find an entrance to the playing grounds. You will leave your room at once . . ."

The fear became stronger. It brooded over him darkly, paralyzing him, deterring him from action.

"This is your last warning. You will leave your room at once," boomed the rasping voice of the Machine.

As his fear still held him in wide-eyed thrall, the bright lights in the

room began to slough off, one by one, quickly leaving him to darkness.

Never in his past could Ronart remember darkness. He became terrified, ill-equipped with knowledge to combat this sudden turn of events. The lamp far down the new corridor was the only illumination present in his little world. Hazy, formless shadows clutched at him from the wall behind him.

The walls seemed to close in on him, pressing, forcing him out.

Unthinking and blindly, Ronart fled from the blackened room. As he left, he heard the wall close behind him, cutting off all retreat.

The hall was long and winding. Lights were situated far apart, so that he could barely see the glow from one to the next. As soon as he passed from the illumination of one lamp, it turned itself out. Always darkness dogged at his heels, spurring him on to the playing grounds.

At one point, underneath one of the final lights, he found some writing on the wall. Someone else, in frantic flight, had paused there to scrawl: "The Game is . . ." The words faded off into the edge of the shadows.

"The Game is"—what?" Ronart said, standing still, his mind completing the unfinished sentence in many ways. But there was no time to linger. The light overhead blinked out and Ronart turned to flee towards the next glow of comforting illumination. But the implication of the words ran with him. "The Game is . . ."

He was still thinking of the writing

when he turned a curve in the hall and found himself at the end of the passageway. Here the light was bright and wholesome. In the wall facing Ronart was a door which opened as he approached it. Inside was a small elevator, barely large enough for one person.

Ronart went inside. The door closed silently behind him. At once the elevator started upward.

The Machine was very tall. That Ronart seemed to know, although he did not know how he knew it. The elevator picked up speed, going faster and faster until Ronart could hardly stand the acceleration. It began to tremble, to shake and vibrate in its shaft, still increasing its rate of flight.

Ronart felt a curious sense of fulfillment. Again he and the Machine were one, flashing upward to some glorious destiny. Every motion of the elevator was a motion of his. Each ecstatic movement brought the two of them as one closer to a moment of triumph.

A sense of overpowering peace pervaded his mind and he relaxed his knees against the terrible acceleration. He was flying through the reaches of lonely space, alone, yet with the Machine as an integral part of him. A unity of force; a dynamic integration of all existence, a completion of extended consciousness—all these were his. And eternity was just around the corner . . .

His mind was so filled with this almost orgiastic elation that when the elevator came to a sickening halt, he was completely unprepared for it.

His knees buckled, his feet slipped from his control, his head snapped back and he crumpled to the floor, unconscious.

WHEN Ronart awoke the elevator door was open. He got up slowly, shaking together his composure, and stepped outside.

He was somewhere near the top of the Machine, far removed from his living quarters. He was standing in a dock on a narrow ledge that ran around the inside rim of the Machine. It was like standing on a little lip of metal that ran around the inside of some huge, black pit.

Even from the door of the elevator Ronart could see the vastness of his surroundings. Empty space seemed to stretch away in front of him to the horizon. Above him and beneath his feet there loomed a blackness that his eyes could not penetrate.

Moored to the rim of the ledge was a small, one-seated vehicle of some kind. Around the ledge at the thousands of other docks were more vehicles of the same design. These he knew were his competitors, the other players. It seemed only natural for Ronart to get into the vehicle and close its door behind him.

"You are now ready to play the Game of White," the voice of the Machine said from a speaker on the dashboard of the car. "In a moment the flier will be freed to your control. At that time the first trial will begin.

"The Game of White will be a series of trials in which all but one of the contestants will be eliminated.

Each of you, the hundreds of thousands of you playing the game, has an equal chance to win.

"Each of the trials that you win will move you upwards in the playing field until the final level and the final test are reached. In between this first trial and the final one you will meet a number of situations—problems that you must solve. If you guess the correct solution, you will be advanced to the next highest level."

Here the voice paused, as if to let the meaning of the instructions penetrate the countless minds that were listening.

"But what happens if you lose?" thought Ronart suddenly. "It didn't tell what happens if you lose!"

"Your fliers will now be released. You will be given a certain length of time to acquire skill in handling them. I will speak to you again later."

Ronart glanced back toward the elevator as the flier moved gently away from the dock. The elevator door was slowly closing, shutting him off forever from Cathy and the first world of the Machine.

Then the flier suddenly dived nose-first out of control into the blackness below.

Instinct more than conscious effort made Ronart grab the controls of the little vehicle. With a little experimentation he got it under his command and pulled it out of the dive. He had fallen several hundred feet below the starting dock. But when he looked up he was consoled to see that most of his competitors had suffered the same fate. Some had

fallen even further, and one or two had dropped completely out of sight.

Ronart quickly learned how to manipulate the flier and soon was putting it through a lazy series of gyrations, working in towards the middle of this huge cavity in the Machine.

The loudspeaker boomed again as he was practicing. "Now you are learning, all of you. And while you do, I will tell you the answers to some of the many questions I feel you asking," it said.

Ronart let the flier settle into a lazy, hovering pattern.

"In the beginning was the earth, the cool, green earth. And the earth was good.

"And, after a time, on the earth was man. And with man, the Machine. And the Machine was man and was of man.

"You are children of the earth, and of man and of the Machine. For now the beginnings of life are to be found only in the Machine. To join the earth and the world of men you must leave the Machine.

"I am the Machine, the guardian of the children of man. To go forth among men, to walk along the edge of the earth, you must be chosen. I shall make the choice from among you according to the rules of the game.

"At the center of this emptiness you will find a column. At one level are a series of openings just large enough to accommodate a single flier at a time. Only a very few of the many openings lead to success—to

the next highest level.

"You will be given a certain time in which to make your selection. But once you have entered one of the openings, the choice will have been made. There is no retreat, no turning back. Either you will qualify for the next trial, or you will not.

"Those of you who have not decided by the end of the time limit will automatically be disqualified. Make your choice rapidly. You will be given one clue as to which of the openings are correct.

"And now, move your vehicles towards the center of the playing field, and begin the First Cycle of the Game of White."

WITH almost one accord all the fliers began converging on the thick, shining column in the center of the pit. As he drew closer, Ronart could make out a shifting pattern in the color of the lights playing around the column.

The whole spectrum of colors appeared on the column immediately above what seemed an endless row of openings. In kaleidoscopic fashion the colors changed, varying in hue, brightness and saturation. At short intervals the colors would pause in their mutations so that each hue was aligned with a specific opening.

By the time Ronart had moved in close enough to observe the colors, others more venturesome were already darting their fliers, almost at random, into the various apertures. How long the allotted time interval would be, Ronart did not know. But

he refused to dart wildly into the column without first giving the pattern some hopeful thought.

He pulled his flier up a short distance from the column and pointed its nose towards one of the openings. Around him on all sides buzzed hundreds of little vehicles just like his. The lights above his chosen hole slipped from a pale orange to a bright red.

"You will be given one clue . . ." the Machine had said.

The spectrum paused, then altered to a hazy violet as the red moved on, lingeringly, to halt above the next aperture. Two fliers darted into the same opening he had chosen, almost colliding in their haste to enter before the colors changed again.

"In the beginning was the earth."

The color above his opening shifted to an intense blue as the violet moved on. There seemed to be thousands of fliers swarming in his vicinity. Three of the little ships rammed into each other just above him. The concussion rocked his flier gently.

The intense blue merged briefly with a white and then mingled with green to form a blue-green of low saturation. A whole host of ships darted in towards his section of the column, most of them smashing into each other or the metallic wall of the center structure itself.

"The cool, green earth . . ."

A discrete green flashed on the space above the opening.

"Green!" Ronart shouted and plunged the flier towards the opening as fast as he could make it go. Another

ship traveling at an angle to his almost rammed him but turned aside at the last possible second. A ship in front of him got in the way. Ronart wheeled around it and darted into the mouth of the aperture just as the colors started to change again. Another ship followed close behind him.

He was in a long tube, scarcely large enough to hold his flier. The walls around him bathed him in green light as he flew along. A short distance ahead of him he could see another ship swimming in a mist of blue-green haze.

He was traveling at a great rate of speed, but soon the flier began to slow of its own accord. The vehicle ahead of him was slowing down too, and suddenly it changed course erratically. He could see the end of the tunnel ahead through which the first ship had already passed.

And then his ship too swam out into a wide, empty shaft at the center of the hollow column. From openings all around the shaft there poured fliers bathed in all colors of the spectrum, converging on the empty middle of the shaft.

There, as each successive wave reached the center, it paused, hung motionless like a swarm of iridescent insects. And then, with one accord, those ships at the center began to fall!

All but the greens!

The blue-green flier ahead of him reached the middle, lingered for just a moment, and then nosed into a plummeting, downward spiral.

In an instant his ship was upon

the spot. It gave a sickening, downward lurch; then it began to climb upward in slow, majestic flight. He had won the first trial!

Ronart sat quiet, stunned. He could hardly believe it even yet. Leaning toward one of the windows in the little machine, he looked down.

Below him was an ocean of color, rippling from the sides of the shaft out towards the center. There it seemed to come apart, to disintegrate. A few specks of pure green lifted themselves from the mass. The rest of the slips became a rainbow-waterfall dashing itself into the darkness below, finally winking out in the depths of the blackness.

"The Plunge . . ."

Ronart straightened up in his seat and dropped his head into his hands. He closed his eyes and rested.

Minutes later his flier came to a halt with a little grating sound. He looked up and found the ship docked at a small platform at what seemed to be the top of the shaft. Stretching around him were other green fliers moored to similar docks disengorging their drivers.

As he got out of his ship a door opened in the wall of the dock. He walked into the elevator, and as the door closed behind him, dropped into sudden darkness.

CYCLE II

THE door to the elevator opened again, and there was light. Ronart looked out, expecting to find himself back in his room. But, in-

stead, he found himself looking out on the same scene he had just left.

He had been hungry when he had entered the elevator. Now his hunger was gone. He had been tired, but now there was no fatigue. His thirst was quenched.

He thought about it a moment before leaving the elevator. Whether he had actually gone back to his part of the Machine and then returned after eating and sleeping he did not know. The memory of the intervening time could well have been stolen from him by the Machine.

Or perhaps he had been fed and rested right here in the elevator, never leaving the spot. This too the Machine could have done for him.

A bell rang. The voice of the Machine spoke through a speaker near him. "Begin now the Second Cycle of the Game of White."

Ronart sighed and moved from the elevator. It closed its door behind him. Doors were always closing behind him, it seemed. The flier rocked gently as he got into it. Quietly he sat waiting for further instructions from the Machine.

"The Game of White is a game of elimination," the loudspeaker in the vehicle said, breaking the stillness that Ronart felt around him. "It is, also; to an extent, a game of chance.

"Last cycle, either by luck or by skill, you chose the correct solution to the problem confronting you. In each successive trial you must do the same, if you are to win.

"Many of you will consider this unfair, irrational. And yet there must

be a choice of some kind made. Not all of you can be freed to walk along the edge of the earth, for earth could not support, in comfort, all the spawn of the Machine.

"And you complain at the lack of information given you. Perhaps you feel it incomprehensible that you should be given so little knowledge. And yet I tell you that here, as well as in the world outside, such is the case.

"Even the wisest of men begins his life with no knowledge at all. Here, as on the earth outside, you must begin at the bottom to rise to the top. Great things come from small beginnings, for such is the natural order of things.

"In a moment your fliers will be released to your control. But first, look around you."

The playing field was much smaller than the previous one, but only by comparison. It seemed to stretch a mile or so across, but was limited in its vertical dimensions by great blots of darkness. Ronart could see only a few hundred yards either up or down.

As in the previous playing field there were docks all along the outer rim of the arena. Moored to each dock was a little ship like his. Ronart guessed that a very small percentage of the players—probably less than five percent—who had begun the game the cycle before were here to start this second trial.

There was no column at the center of this field. There was only a stygian blackness above and below

him. And then, a speck of light appeared in the exact center of the dark ceiling. In a matter of seconds it grew to a dazzling circle of bright illumination.

"This is a test of time," intoned the Machine. "To win this trial, you must solve the problem presented to you in the briefest of spans.

"The problem may at first glance seem an easy one, but let me caution you that it is not as simple as it appears. To those few of you who solve it will come a certain feeling of humility. You have been given one clue to the correct solution.

"And here is the structure of your second trial. The only possible safe exit from this playing field is through the circle of light you see above you. To win this cycle you must position your flier through this circle.

"Good luck to all of you. Begin at once. You are now being timed."

Ronart felt a slight easing of the controls of his little machine as it was loosed from the protecting dock. And at once some of the other fliers darted up towards the burning halo that promised safety.

Ronart watched them, fascinated, unable to bring himself to follow them. They flashed nearer and nearer to the goal, approaching it from all directions. And as they moved closer to the circle of light, they seemed to lose headway, as if when they passed a certain level the power in their fliers had been automatically shut off. Up and up they strained, traveling on the impetus of their hasty beginning. Closer and closer they came to the

beckoning goal.

And then, in succession of approach, each one gave a little shudder and turned into a rapidly accelerating downward plunge, completing the cycle of its hyperbolic journey.

Ronart turned his eyes away from the scene, petrified, unable to face the reality of the situation. And, as he turned, he saw one of the fliers near him drop away from its dock and fall into the darkness below.

"Great things come from small beginnings," the Machine had said.

The little flier below him came to a gradual halt.

"To those few of you who will solve it will come a certain feeling of humility . . ."

The little vehicle underneath him paused in space, seeming to catch its breath for another span of flight.

"You must begin at the bottom to rise to the top . . ."

As the flier under him began moving again, Ronart came to life, plunging the controls of his machine forward. It dipped quickly into the yawning blackness beneath him.

He pulled the flier up to a sudden halt in its downward flight when he could barely see the circle of light above him.

"Time is running out," boomed the voice of the Machine in his ear. "Make your decision now."

Turning the nose of his machine upward, Ronart gave it full acceleration, heading straight for the glorious burst of illumination. His flier hummed and sang as it built up momentum on the steep climb. Ronart's

mouth was clenched with firmness as he raced to success.

"Hurry! Hurry! Time is almost out," called the Machine to all the players.

Around him plunged the falling ships of unsuccessful candidates. Ronart could not recognize their faces, nor could he stop to think about their fates. Sympathy would be wasted.

The circle of light grew larger and larger with each passing second. He flashed past the level of the starting docks, pressing his flier to its utmost velocity.

Now he could see the aperture from which the brilliant light was pouring through into the darkness of the playing area. Just a little distance to go!

And then the power propelling the flier gave out. He began to lose speed rapidly as the pull of gravity and friction played against the inertia his flight had built up. Success was so close to him now, if only he could make it, if only he had built up enough speed.

"This is your last warning," cried the voice of the Machine.

Closer now. He could make it if his time lasted.

"If you have not already crossed the barrier, you have lost."

Ronart's heart fell. He had failed! "I am sorry, but . . ."

And then, with what seemed like a sudden burst of energy, he shot through the opening and across the barrier into the land of bright light.

... The Second Cycle of the

Game of White is concluded."

Ronart collapsed in the seat of his flier. Again he had won. Just barely, it was true, but again he had won.

The little airship floated gently upwards into the light. Beneath him the entry opening had completely closed—another door shut behind him, separating him from the old life.

He was still breathing heavily from the shock of his test when the flier nudged into a waiting dock. For a moment he simply sat, unable to call out the energy to move. And then, slowly, he edged open the door and stepped out onto the metallic platform.

Around him in the area of light were numerous other fliers. He glanced at them, taking mental notes of their number. Again it seemed to him that only a fractional part of the large number of players who had begun the second cycle had won it. All around the big, circular playing area other like him were getting out of their vehicles, standing on the platforms, waiting for further instructions.

Getting out of the flier to his left was a man, unfamiliar, who waved to him good-naturedly. He turned to inspect the one on his left.

And stood thunderstruck.

The player getting out of the other vehicle was his own Cathy!

IT was a period of several seconds before Ronart could collect his senses. Through his mind raced a thousand ideas, a thousand possibilities, a thousand questions to be an-

swered. His own Cathy, whom he thought still to be hidden from him, safe in the bowels of the Machine!

He found control of his voice and his body and went rushing to the edge of his dock, waving his arms and shouting.

"Cathy! Cathy!"

She turned towards him, separated from him by several feet of yawning blackness. And then her eyes closed and she crumpled to the hard metal floor at her feet.

"Cathy! Oh, good Lord, Cathy!" he cried, flailing his arms in frustration. The crevasse between the two docks was more feet than he could jump and there was nothing on his dock with which to make a bridge. He had no way of getting to her, except . . .

The idea came to him, and at once he was back in his flier, shoving it away from his docks. The controls responded sluggishly. He had to push and strain against them to make them work at all. But by dint of sheer power he forced the little ship away from his dock and across the blackness to Cathy's dock. He leaped out of his flier, slamming the door behind him and kneeling at her side with almost the same motion. He did not see his little ship as it edged away from the dock and positioned itself, again, back at the first dock it had been moored to.

"Cathy," he said as he raised her head gently, "Are you all right?" she didn't appear to be injured.

There was a fluttering of her eyelids, and when she opened her eyes,

his face was close to hers.

"Oh, Ronart, it *is* you."

"Yes, Cathy. It's going to be all right."

She moved, sitting up gradually,

but as she moved she never took her eyes from his face. And then, most of her fear gone, she relaxed and threw her hands over her face.

"I'm sorry, Ronart. You'll never



know how sorry I am. I knew it would happen this way."

"But why did you play this time? Cathy, why, why, why? You know that only one of us can win!"

"I know, I know! But after I left your room, I went back to my own. And it began to talk to me, Ronart, the way it did to you. I fought. You'll never understand how hard I fought against it. But it won. The Machine won, Ronart, and I had to play the game. I couldn't help myself." She began to cry, softly, as a child does when its favorite toy is hopelessly broken.

A bell rang. Ronart looked around him. All over the rest of the playing area the other participants in the Game of White were walking into the elevators.

She took her hands away from her face. "What are we going to do?" she asked quietly.

"I don't know. I must think."

She reached out and ran her fingers through his hair as if to make sure that he was really there, and not just a figment of her imagination, a phantom from some feverish dream. And he, thinking, paid scant attention to her caresses.

The sound of elevator doors closing all around the playing area brought his mind back to the immediate situation.

"Cathy, we'll have to stay here on the dock. If we get into the elevator together, we might be caught. And my flier's gone back to its dock."

Her warm white hand slipped down

from his head to run its way along the edge of his face.

"It's a chance, Cathy, but we'll have to take it."

Her eyes met his, smiling, trusting, comprehending. She said nothing to him out loud, giving her proud assent with her eyes alone.

"At least this way we'll be together, no matter what happens. We can sit and talk and figure out what we're going to do next cycle," he told her.

The light of the playing area began to dim slowly as the Machine adjusted itself to the temporary absence of the contestants. And as this happened a feeling of peace and deep sleep settled over both of them. Her hand slipped down from his face and clasped one of his hands.

"Have you figured out what we will do next cycle, Ronart?" she asked with slumber in her voice.

"Not yet, Cathy. We'll lie here awhile and I'll think about it." He stretched out on the hardness of the metal surface of the dock.

Stretching out along side him she said, "Do you forgive me for entering the same game as you did?"

He squeezed her hand gently. "Of course I do. Rest now. We'll need the energy next cycle."

Darkness was all around them now, and silently, before either of them was aware of it, the darkness had slipped inside of them. For many hours they lay, side by side, hand in hand, lost in a land of confusing dreams.

CYCLE III

CATHY awoke. There was light around her as she sat up. The playing field was brilliant with illumination in anticipation of the next trial.

She looked down with saddened eyes at the sleeping form of Ronart. It was so unfair, this game. Why did both of them have to play at the same time, when, at best, only one of them could win? It seemed a cosmic joke to her, yet she did not feel like laughing.

But most of all it was unfair to Ronart, she thought. It had been by luck, by sheer chance that she had come through the first two trials safely. The first trial she had blindly guessed at which of the colored openings was the right one. And somehow, she had blindly guessed the green.

The second trial was even more an evidence of her luck. When the signal to begin had come, she had lost control of her flier, and before she could pull it out of its fall, she had dropped almost to the limit of the lighted area. She knew that she could never have deduced the answer by herself. The words of the Machine, the clues it gave, meant nothing to her at all.

And yet, she knew instinctively, Ronart would figure them all out. Inside of her she knew that Ronart was destined to win the Game of White.

She also realized that all that was changed now, that Ronart would never leave her, never allow her to

fail unless he failed with her. It was so unfair!

Quietly she disengaged her hand from his and stood up. The playing area was deserted of contestants still. Only the little fliers bobbed silently up and down, little ships buoyed up at their docks by the incredibleness of the Machine. She walked to the edge of the dock and looked down.

At her feet, stretching away beneath the lighted playing area like an inky, cloudy carpet, lay the empty darkness, the void, the land of the unsuccessful, the destination of those candidates who took "The Plunge."

And looking, she knew what she must do. It would be so simple for Ronart to go ahead with the winning of the Game of White if only she weren't there. He would wake and find her gone and never know. It was the only way.

She put her feet close together, closed her eyes and jumped.

Down and down she fell, with incredible rapidness, twisting and turning in her flight. She felt the buffeting arms of blackness envelop her and opened her mouth to scream, but sucked air in through her mouth instead as she felt herself torn from her flight and thrown roughly down on something cold and hard.

"You little fool. You wonderful little fool."

It was Ronart's voice!

"Don't you know that I'd have guessed, and would have followed after you?"

She was afraid to open her eyes,

knowing what she would see—Ronart, sitting on the surface of the dock, looking down at her, knowing what she had planned. Ronart, who must have awakened just in time to see her poised on the edge of the dock. Ronart who must have caught her just as she slipped over into the abyss and threw her back on the floor of the dock to save her life.

A bell rang. There was a sibilant sound of elevator doors opening. The time for the third trial had arrived.

"Now, listen to me, Cathy. Here's what we'll do. We'll both get into your flier. It will hold us. And we'll play the rest of the game together. That way we win or lose together. Do you understand?"

She threw her arms around him for an answer, finding courage to open her eyes as she did so.

"Begin now the Third Cycle of the Game of White." The Machine was speaking to its children. There was a hushed noise as the elevator doors closed behind the other contestants.

"Get in the flier, Cathy."

She got up and walked to the little ship and opened the door. He followed in behind her, crowding her as little as he could. It was obvious from the tight fit that the fliers were not designed to be operated by more than one person. He shut the door behind him. The vehicle edged away from the dock, slowly drifting towards the platform Ronart had landed on originally.

"I'll run the controls, Cathy, and make sure . . ."

Ronart dropped his sentence in

midair. A bright red light on the instrument panel began flashing. A strident bell somewhere in the ship began to clang.

"Section 12 of the Rules of the Game has been violated. Two contestants are occupying the same flier," came the ringing voice of the Machine over the panel loudspeaker.

"Ronart, what will we do?" Their little flier edged forward gently.

"Section 12 specifically forbids two contestants from joining forces for the playing of the Game. If the situation continues, both guilty contestants will be immediately disqualified."

Cathy looked at him wildly. He turned in his seat, and the flier rocked forward trying to regain balance. He twisted at the door handle violently, attempting to open it.

"Ronart, let's go together," she screamed at him. "Stay with me, Ronart, let's stay together!"

"Don't be crazy, Cathy. There's another way." He had the door open now and gathered his body together in the doorway. "My flier is just a few feet ahead. I can jump to it if I have time."

She looked and saw the edge of a dock almost parallel to them, and moored to it, Ronart's empty airship. If her flier kept up its drift, it would soon be an easy jump.

"You have been warned," said the Machine harshly. "Section 12 of the Rules . . ."

"Push me, Cathy, give me a shove! Now!"

Quickly she turned to him, and

bracing her body against the side of the flier, pressed out strongly against his body just as he jumped. She saw him make the edge of the dock, slip down momentarily toward the blackness below, and then catch hold and pull himself up onto the ledge. Without waiting to rest he rushed into his own flier.

"Cathy!" he called across the space between their ships. "When the trial starts, follow me. Stick close behind!"

"Cycle Three of the Game of White will continue as scheduled," droned the voice of the Machine.

ALL around him the ships of the other contestants were hovering into life as their drivers maneuvered them away from the docks. The playing area for this, the Third Cycle of the Game, was much smaller than Ronart had remembered from the cycle before. And of the hundreds of thousands of players who had begun the game with him, hardly more than a thousand or so remained.

"I congratulate those of you, my children, who have come this far in the Game of White," the Machine said. "You have probably already noticed that almost all of your brethren have been eliminated. And yet, the hardest trials are still ahead of you.

"But this is as it should be, for anyone who leaves the machine must earn the right to do so. And to win this, the third trial, you must be right in your solution of the problem presented to you.

"Soon now one of you will have

passed all the trials and will be allowed, by the Rules of the Game, to go forth on earth—there to find the cool happiness of knowledge and the warm affection of the human community. But you should know now, before the game is done, that life in the world of men is a difficult thing. Life here as children of the Machine is child's play as compared with the complexities of earth. For all of life is a struggle, a battle, a constant war of one kind or another. So it begins, and so shall it end.

"In this cycle you will be presented with a labyrinth of intricate design. There will be many entrances to this complicated maze. And there will be many exits, but only one exit will lead to success and the next highest level. Look around you."

Above the level of the docks, appearing irregularly around the playing field, Ronart saw a ring of cavernous openings. Motioning to Cathy, he edged his flier up towards the nearest one.

"You may enter any of these passages you wish. Every few hundred yards you will be presented with a crossroad. If, at any of these conjunctions, you choose the correct corridor, you will continue unhindered towards the proper exit.

"If, however, you take the incorrect turning, you will invariably be returned to this, the central playing area. During the course of the play you will be allowed two mistakes. Twice you can safely return to this neutral ground. But the third time you find your way back to the start-

ing point, you will be disqualified.

"Along the way you will find a great many signs or clues which might serve to help you arrive at a choice at each conjunction. Only one of these signs, however, will be a valid one. It is up to you to discover which clue is the proper one, leading to success. You have already been given one indication of which sign will be the correct one to follow.

"Remember, three mistakes, and you are disqualified.

"Only a mere handful of you will succeed at this level. But I wish to all of you an equal amount of luck.

"Begin now the playing of the Third Cycle of the Game of White."

RONART looked around to make sure that Cathy was there. Her little ship was close in but slightly behind him. He signaled for her to follow, and single file they edged their way into the nearest of the openings.

The long, dark corridor was fairly wide. It could easily accommodate five or six of the fliers abreast at its diameter. The only visible light in the tunnel came from four growing stripes of color. Running parallel on the ceiling were a stripe of blue and one of green. Underneath, on the floor of the tube, Ronart saw a brightly shining line of pure red and a shimmering line of yellow. Behind him he could barely make out the silhouette of Cathy's flier.

The two of them progressed slowly down the twisting tunnel. Ronart was afraid to put any speed to his vehicle, both for fear of losing Cathy

in his rush and for fear of being forced to make a sudden decision at the first crossroads. And as he flew gently along he tried to puzzle out the meaning of the colored lines above and below him. These were doubtless some of the clues that the Machine had spoken of.

But even with his caution, the first conjunction was upon them without warning. They turned a sharp curve and found ahead of them a branching of the tunnel. Ronart brought his flier into a tight circle to inspect the situation.

Branching off to the right of the corridor they were in was a brilliantly lighted channel. The dark corridor angled off to the left and continued in its darkness Ronart knew not where.

He looked at first for the colored lines, and found that the blue and the red disappeared into the haziness of the blackened corridor. The yellow and green stripes, however, one above and one below him, turned off into the avenue of light. There were so many clues!

Ronart circled around in the crossroads several times. And then, realizing the futility of indecision, picked the lighted corridor and headed into it, feeling that even if it were not the right one, at least Cathy could follow him with ease.

The green line on the ceiling and the yellow on the floor of the tube lead the way. Ronart wondered if again the color green, symbol of earth and victory, could be the proper clue. It seemed peculiar that the same clue would be used in more than

one trial. But then, the Machine had given no clue to any other color in its parting instructions.

Before Ronart could come to any decision the two little ships were at the next choice point. Again Ronart put his flier into a lazy circling pattern while he tried to divine the solution to the puzzle.

At this branching of the corridors the lighted tunnel ran off to the left while there was a dark one to the right. The yellow stripe on the floor turned into the dark tunnel, the green one into the corridor of light. And running out of the dark tube ahead and switching into the lighted one to the left was the blue line of light that they had left behind at the last crossroads!

Again Ronart could not comprehend the pattern of the clues. Which of the colored lines had meaning? Or was it a matter of always choosing the lighted or the darkened tunnel? Or perhaps it was a matter of selecting alternately the dark or the light or a certain combination of the colors.

He looked over at Cathy, following him in the byrations of indecision. He waved reassuringly at her, but felt less than reassured himself. If it were a matter of alternation of light and dark, he should go left. If he should follow the green line again he should turn left. If the yellow line were the guide, he should turn right. If the blue line were to be followed, it made no apparent difference at all. These clues he could understand.

Weighing all of the possibilities in

his mind he came to a decision. Most of the clues pointed to the left, to the lighted tunnel. So he turned his ship in that direction, again signalling to Cathy to follow.

Even at the slow pace at which they traveled, it was only a few moments later when Ronart saw a brilliant gleam of light ahead. He closed his eyes briefly in the agony of making another decision. So much depended on his making the proper choice. But when he opened his eyes he found that his agony had been wasted. There would be no decision to make at this crossroads. For the two little ships were slowly emerging into the initial playing area; they were back to where they had started from!

As they crossed the entranceway the loudspeaker on the control panel spoke: "Mistake Number One has been made. You will be allowed only one more wrong choice before being disqualified."

AS they flew out into the playing area, Ronart brought his flier up into a hovering movement and motioned to Cathy to come alongside. He tried to open the door of his flier so that they could talk, but found that it was locked. He tried shouting to her, but he could tell that his voice was not carrying above the slight whine of the fliers' engines. There was so much he wanted to tell her.

But looking into her eyes as she sat there in her own ship he realized that there was nothing to be said between them that had not already been

said. In her eyes he could read the trust she had in him, the strong devotion and determination within her to follow him wherever he led.

"She should have picked someone smarter than me to follow," he said to himself in the disgust of assumed guilt. "Why did she have to get into this game at all!"

And while he said it he knew that he didn't mean it, that what he said was only the mouthing of his own distrust of himself, his own feelings of inadequacy. Why blame her for his own failings?

He waved to her again and turned his flier around and headed back into the opening from which they had just emerged. He knew that it would do no good to further evaluate the clues until they were back at the crossroads where he had made his first mistake.

It seemed to Ronart as they flew along the lighted tunnel that it was further back to the conjunction than he had remembered. But the blue and green stripes were there on the ceiling as they should have been. But he hadn't recalled so many twists and turns in the passage when they had been over it the first time.

And then they were rapidly approaching another glow of light. Ronart had no particular apprehension about this crossroads, knowing that his next decision would have to be to follow the blue line on into the darkened corridor. What lay at the end of *that* corridor he didn't know, but it is there that the next real choice would have to be made. His

mind was so relaxed that he could hardly stop his flier in time when he and Cathy arrived at the actual crossroads. And all at once his great confidence fell to pieces.

For there, coming out of the lighted tunnel to his right and continuing with the blue line above him into the darkness of the tunnel to his left, was not a yellow line, but a brightly shining red one!

"It . . . tricked me," he said in sudden, frustrated anger. "That was why it seemed so far back here. Somewhere along the way the Machine changed directions on me!"

Emotions of fear and anger and chagrin at the unfairness of the trick swam through his body. He could hardly control the tears of bitter disappointment that welled up his eyes.

Slowly, however, with the knowledge that anger would never help, he regained his composure. He would need full command of his faculties if the maze were to be understood. He rested his head in his hands and began to mutter the problem aloud.

"It can't be a matter of mere alternation of dark and lighted tunnels. That's out. And the green line failed, so we can count that out too. It might be the blue line that's the one to follow. But that can't be right! I'd be going in circles.

"Perhaps it's a matter of single and then double alternation of the lighted and dark tunnels. Or maybe something ever more complex than that. Of maybe . . ." In his frustration he stopped his talk to look again at the corridors ahead of him. And no-

ticed for the first time that there was something slightly uneven about them.

The tube to his right seemed a little higher than the one to his left, as if leading upwards. The one to his left seemed to slant slightly downwards.

"Of course," he said, some of his confidence returning. "That was the clue, and I was too blind to notice it! *'And only one exit will lead to success and the next highest level,'* the Machine said. That's it!"

Without hesitation he turned his flier in to the right hand passage, motioning Cathy to follow. As he had expected, the tunnel followed a slightly ascending spiral. And it was not long before the next junction was upon him.

Here there was hardly any choice to be made, Ronart thought. For angling off to the left in a steep upward slope was a blackened corridor. The one to the right descended sharply into a glow of light. It seemed obvious, and Ronart smiled and waved to Cathy to follow him.

He had just turned his flier to the left, when out of the darkness, from the tunnel into which they had been headed, rushing madly down upon them, there came another flier!

RONART slammed his little ship over to the opposite wall to get out of the other contestant's way. The rival flier seemed wildly out of control. It barely made the turning into the corridor from which Ronart and Cathy had just come, caroming

off the far side of the passageway as it went. And then it was swallowed up in the darkness.

Ronart looked back hurriedly as it passed to make sure that Cathy had gotten out of the other flier's way. He sighed with relief of tension as he saw that she had.

And then he began to laugh at the simplicity of the whole thing!

Dark corridors and lighted ones; red, blue, green and yellow lines; double, single and multiple alternatives; tunnels sloping up or down. They were all a great, cosmic joke—for they were all wrong!

They had to be, for he had ruled all of them out except the elevation of the different corridors. And if he had followed that clue, they would have ended up again, back at the beginning of the labyrinth.

This he knew, for under no circumstances would they have ever met another contestant coming *towards* them, coming the *wrong* way down the correct path towards the one successful exit.

Cathy saw him laughing and feared for a moment that he had lost his senses. But then she saw the unmistakable grin of victory spread across his face and knew that all was well. He had figured out the secret of the maze. She pushed her flier forward eagerly as they both plunged down into the darkness of the right-hand corridor.

RIGHTNESS. It was as simple as that. All of the kaleidoscopic array of clues were camouflage, de-

signed to confuse even the most wary of contestants.

"Anyone who leaves the Machine must earn the right to do so," the voice had said at the beginning of the trial. *"And to win you must be right in your solution of the problems presented to you."*

Rightness. Forget the rest of the clues. To win, to find the one and only successful exit, one had to be *right*. Ronart laughed. The touch of irony added to the complexity of the situation was not lost on him.

Ronart was relieved to see that the corridor they were in which had originally slanted downward was now sloping abruptly upward. With Cathy following close behind him, he flashed through another crossing of the tunnels, again choosing the pathway that lay to the right, ignoring the multiplicity of criss-crossing colored lines, the alternate patterns of lighted and darkened channels and the initial slope of the corridors into which they flew.

Their fliers picked up speed. Ronart tried to slow the pace of their journey down a little to keep full control of his flier, but the little ship refused to heed his desires. Often at the junctions of the various tunnels, they came close to colliding with other contestants who arrived at the crossroads at the same time. But always the other players were coming out of the left-hand tubes, never from the right.

Faster and faster they flew and Ronart had to fight to keep from losing Cathy in the sudden bursts

of acceleration his little ship put on. The force of centrifugal swing kept pushing both their fliers to the left-hand side of the tunnels at each choice-point. Time after time Ronart barely had a chance to bring his ship back into the center of the channel before another crossroads was upon them. And more than once, when collision with the dividing partitions at the junctions seemed inevitable, Ronart was forced to use all of his skill to keep to the right-turning pathway. Somehow Cathy managed to keep behind him all the way.

Higher and higher into the Machine they sped, in a mounting clockwise spiral, turning right at each crossroads while the force of centrifugal swing tried to push them always to the left.

Ronart had managed to make one of the turns by scraping the outside wall of his chosen tunnel when his flier began to lose speed. He turned around and saw that Cathy's little ship was slowing down too. The next meeting of the tunnels slipped past them with ease when the corridor took a sudden steep turn upwards and then leveled off to a straight run. Their fliers lost more headway and they seemed to be barely moving when Ronart and Cathy slipped out of the final tunnel into what looked like the inside of a giant globe.

Running like a girdle around the inside perimeter of the sphere were a string of docks, six in number, but all widely isolated. Ronart smiled to himself as he saw them, knowing that somehow, through some blind mys-

tery of chance, he and Cathy had won again. His flier began drifting slowly towards one of the docks above them.

Turning in his seat he motioned to Cathy to follow him to the dock. Now that the third trial was over they could sit and talk again, as they had at the end of the Second Cycle. It would be good to talk to Cathy, to have her again close to him, for they had to plan what to do next.

Cathy was waving to him violently. Her ship was separating from his and heading for a dock on the opposite side of the sphere. When it became apparent to him that she was unable to follow him, he turned back to the controls of his flier and attempted to go to her. But the controls were locked, inoperative. As much as he twisted the steering rod, it refused to wheel the ship around in the other direction. Even the speed controls would not function.

Then Ronart understood that they were being forcibly separated. His flier positioned itself at the dock and refused to budge an inch further. As Ronart opened the door to get out he heard a slight clicking sound. He looked down and saw that some mechanical device had automatically locked the flier to the dock.

Ronart stood up on the metal platform and glanced around him. Four of the six docks were already occupied. Cathy's ship was slowly approaching a resting place directly across the globe from him. As he watched another flier emerged from the entranceway close to the bottom

of the sphere and drifted up towards one of the empty docks. In a few seconds still another flier entered the arena and the entrance opening slowly began to close.

"The Third Cycle of The Game of White is concluded. There will be no further winners," the voice of the Machine said from a loudspeaker on the wall behind him. There was the hushed whisper of an opening door.

Across the several thousand yards diameter of the sphere Ronart could sense Cathy emerging from her flier. She stood up on the dock and looked around for him. He waved to her and she returned the gesture. The distance was too far to attempt even shouting to her. They were cut off from each other for the time being.

A bell rang. "You will now enter the elevators behind you. I offer you again my congratulations. But rest well, for you will need all of your strength for the trial that will be staged next cycle. The elevators are waiting."

Ronart and Cathy faced each other across the interregnum of space. And then, with a final wave of her hand, she was gone. For just a moment Ronart stood staring across at her empty dock, his mind filled with unanswerable questions. Then he turned around and walked into the elevator. The door shut behind him.

CYCLE IV

THE door opened and Ronart was facing out into the playing arena. He had no memory of what had transpired from the time

the door had closed behind him. And yet something must have happened, for now he was facing towards the door. When he had entered the elevator, his back had been towards it.

He felt no hunger, no tiredness, nothing but a continuing sense of anxiety and apprehension. For with only six contestants left, this would probably be the final trial of the game. He was determined that at all costs Cathy should win, no matter what happened to him. And having come to this conclusion, having put aside his own hopes, he felt much better.

He strode out onto the dock. He noticed at once that during the time of his blackness something had been done to his flier. The front part of it seemed the same as always, but appended to the tail were what seemed to be a mass of colored streamers. Ronart walked over to inspect the addition.

It seemed to him that someone had taken the little ship and given it a skirt. Girded around the flier in the rear was a golden band, and streaming away from it were long, glowing ribbons of various hues and brightnesses. The streamers had a metallic, liquescent sheen to them, giving the ship the appearance of some fantastic bird of exotic plumage.

A bell rang and he looked around him. Far across the sphere Cathy walked out on her dock. She took only a pre-emptory glance at her flier and then raised her head and waved to him. He signalled back to her happily.

"You will please enter your vehicles," came the Machine's monotone voice. "Please do not be alarmed by the apparent changes in them."

Ronart watched as Cathy climbed safely and unhesitatingly into hers. There was a sound of a click and Ronart's ship danced lightly away from its moorings. Ronart reached out a hand and steadied it, bringing it back to the dock. He turned to enter the ship.

As he did so, he noticed that the contestant nearest him was still standing on her dock, her ship floating a few feet out from it. There was a horrified look on the woman's face. Ronart got quickly into his vehicle, watching the woman as he did so.

A mask of terror covered her face as she realized that if she had no ship, she could not take part in the coming trial. Her flier bobbed back a bit towards the dock, and then, pendulum fashion, started to yaw back away from her. She stepped back a foot or two and, running forward, leaped out into space.

Her fingers missed the open door and the ship bounced away from her, spinning around as it did so. She clutched wildly at the smooth sides of the vehicle but could find no hold. The rear part of the ship turned towards her and she managed somehow to catch at the trailing streamers.

Ronart sighed. The woman was safe now. Even though she was a rival of his, he hated to think of her losing the game in that fashion. He started to turn away when he saw the woman's ship turn its nose to the

sky, buoyed up by the sudden shift in weight distribution. For a few seconds the woman hung suspended in midair, like a ripe fruit of some kind, ready for picking. Then the streamers gave way at the weight of her and she dropped, spinning, enveloped in a roseate, glowing coffin of torn streamers.

Ronart turned his face away quickly to keep from watching. But he could not keep from his ears the terrified scream she made as she fell.

"According to Section Five of the Rules of the Game of White," the Machine said, taking Ronart's mind off the woman, "You must all now be given the following explanation of the machinations of the Game itself.

"Up until this point there has been no limit to the number of possible winners for each trial. It has been found, through experience and the careful planning of the trials, that there are statistical limitations to the number of successful candidates who pass each Cycle's problem. But theoretically all of the candidates could have been successful up to this point in the Game. This has never happened in fact.

"It is also still possible that there will be no winner at all for this game. This you must all take into account.

"But what is most important to all of you is this: You are now in the next to last stage of the Game of White. And from this particular playing field there can come only two winners, one of whom must be eliminated in the next trial."

As Ronart listened, the lights in

the playing area began to slowly dim. He tried to position his flier closer to Cathy's, but the controls of the ship would not respond.

"There are six possible exits from this playing arena. Only one of the six leads to the next highest level. And only two of the candidates now present will be allowed to leave by this egress.

"And, you must be warned, that it is not mandatory, according to the Rules, that any of you be successful, or that more than one of you emerge victorious from this trial. But the success limit is two."

Around him floated lazily the four other occupied vehicles, their long streamers shimmering with glowing colors in the dark. The empty flier drifted lazily towards the top of the sphere and lodged there, trapped against the ceiling.

"In a sense it is tragic that so few of you are ever allowed to leave the Machine. Although the Machine is not equipped to emulate the emotional responses of the human race, it can still comprehend the apparent unfairness of the situation. No explanation for this unjustness can be offered, other than to say it is an ontogenetic necessity of the crowded population of the earth.

"The six possible exits will soon be burning with light. You will be given one clue as to which is the exit that leads to success.

"The problem is before you. It is with the highest hopes for all of you, my children, that I order you now to begin the playing of the Fourth Cycle

of the Game of White."

Around the darkened playing field there sprang up six blinding dots of light, each of which was equidistant from the center of the area. One dot was at the zenith of the sphere, one at its nadir, and the other four formed the corners of a square around the equator.

Gradually the intense brightness of the dots dwindled to a milder glow and lines of color became visible. The dots began to swell, carrying the colors with them, until there seemed to hang around the otherwise blackened sphere, six radiant globes of fire—six miniature planets swimming in a pelagic darkness, with flaming stripes of color for meridians.

Ronart found himself in control of his flier and quickly headed towards Cathy's side. There was light enough in the arena for him to identify her ship. As he pulled up alongside of her, the inner lights in the gateways of fire blinked out, leaving only the multi-hued, shining lines of latitude and longitude. The globes looked like six giant bird-cages floating in the sky, radiant to look at, hollow in the center.

And the little ships, with their bizarrely glowing tail-feathers, seemed like outlandish birds to Ronart. The problem was, he thought, which of the birdcages offered security?

Ronart tried the door of his ship and found that it would open. Catching a firm hold on the controls, he leaned out of his ship and called to Cathy.

"We go together. All right?"

Cathy leaned out of her vehicle. "Of course, Ronart. I'll follow wherever you lead."

Ronart pulled himself back into his ship and shut the door, giving a final wave to Cathy. Then he looked around to see what the other three players were doing.

The bands of colors on the six globes had begun to rotate in random, twirling fashion. These technicolored gyrations made racing patterns across each of the little fliers like the flickering reflections of a multi-faceted chandelier.

The rest of the contestants were bunched together in a little knot close to the center of the arena. As Ronart watched, one of the players, more adventuresome than the rest, pulled out of the group and nosed up to the topmost of the shining, globe-like exits. The tailfeathers, the long streamers extending out behind the flier, rustled and danced at the motion, leaving behind them a phosphorescent trail of tiny, glimmering particles.

The movement of the ship enabled Ronart to get his first good look at the newly added appendages.

"An outer sheath of azure," he thought, "and next to that, a longer, inner sheath of aquamarine. Inside that, a set of topaz streamers. And at the very center, stretching farther out than any of the rest, a bunch of ruby-colored trailers. Why did the Machine put them on for this particular Cycle? They seem so useless."

The other two fliers had now joined their more curious comrade in the close inspection of the topmost

ball of twisting colored bands. The leader of the trio, seemingly satisfied with his perusal of this globe, turned and sped quickly to one of the four balls suspended around the girdle of the playing arena. The other two fliers joined in frantic haste to accompany their leader.

Ronart wondered why the three were sticking so close together. Then he realized that if the first one solved the riddle and sped through the correct gateway, the faster of the remaining players would follow him quickly, leaving the slowest of the triumvirate, Cathy and Ronart behind for good.

Motioning Cathy to follow, Ronart pushed his flier down into the midst of the group.

Proceeding with caution, the band of five contestants flew to each of the four globes in the middle of the sphere. After this they dropped down to look at the one at the nadir, their ships leaving a shimmering, gossamer trail in the air as they flew.

They hung suspended over the bottom ball for some time. At this close range the circulating bands of colors seemed like giant, rotating blades, slashing back and forth, gleaming as they cut through empty space. Ronart felt that mere light could not damage the fliers, but still he knew that it would take courage to fly a ship into that morass of flashing knife-like bands.

The sudden movement upwards of the other ships caught Ronart by surprise. Even Cathy had caught up with the other three before he did.

They had floated about half-way up to the center of the arena when the lead ship turned quickly on its tail and dived straight for the burning globe at the bottom of the playing area.

"He's got it!" Ronart shouted, and grabbed at the controls of his vessel. He put it through an about-face, and had started diving downward himself when he saw it was no use. Both of the other two players were far ahead of Cathy and him. In disgust he slowed his ship down and waved to Cathy to stop and watch. It was no use to race them.

"If he's right, if he's solved it, I'll . . ." Ronart stopped breathlessly as the first ship plunged straight into the maw of the revolving bands of color. The other two were close upon it, one a little ahead of the other.

For a moment the first player's ship hesitated as it streaked through the first layer of moving stripes on the globe. Then three of the brilliantly-hued lines moved across the little ship at once. There was a fiery burst, a riot of chromatic disintegration, and the flier was no more!

"He guessed wrong!" shouted Ronart.

The two following ships changed courses at once, trying to avoid the fate of their leader. The slower of the two heeled around successfully, but the one closest to the globe was going too fast and had too little time to turn out of the path of destruction. It skittered around the edge of the sphere, careening wildly. Then it touched down into the path of the

circulating, knife-like bands and exploded.

There were only three of them left.

CATHY moved her flier over close to Ronart's, as if for comfort and reassurance. The other player moved up beside them. Ronart could see the sweat beading out on the man's face.

"He'll wait now," thought Ronart, "until one of us has solved the puzzle. Or until one of us *thinks* we have. Then he'll try to be the second one through the gate."

Ronart knew that it was up to him to figure out which of the five remaining portals to success was the right one. He slumped down into his seat to think about it.

"The Machine said that we'd be given one clue. And yet it never mentioned colors. Nor did it say anything about positions." So far as Ronart could determine, no hint possible lay in what the Machine had said. But, where then did the clue come in?

Looking up, Ronart saw that the other player had edged his way in between Cathy and himself. For a second he resented the intrusion. And then he realized that the man in the third ship was playing for his life in a game where even the slightest of advantages was often enough to assure victory. Ronart put his ship into a quick, steep climb, then braked back down to Cathy's side again as the other man was caught by the suddenness of the change in course.

He opened his door and leaned out to talk to Cathy as she opened hers.

"Have you solved it yet, Ronart?" she asked before he could speak.

"Not yet. But it shouldn't take long," he told her, wondering inside if he could ever do it. "There's something we have to do first, though. We've got to get rid of our scavenger."

"But, Ronart," she protested.

"We've got to, Cathy. Unless we do, there's always the chance that he might get through the gate before you do. It's the only way."

She looked hurt. Her eyes began to well up with tears.

"You do trust me, don't you?" he asked. Her eyes were downcast, miserable, but she nodded in agreement.

"All right, then, do just as I say. As soon as I figure out which is the right exit, I'll signal you. Then I'll head towards one of the globes, but not the right one! Remember that. The first one I head towards will be a loser, so don't get too close to it."

"I don't understand," she said, interrupting him.

"It's simple. I'll head towards the wrong one at top speed. You get right behind me, but not too close. The other player will probably try to cut you off. Let him do it!

"The closer we get to the wrong exit, the further back you pull. But make it look like you're fighting to get him out of the way.

"When we get right up to it," Ronart continued, "we'll both change course suddenly. He won't expect it, and . . . well, we'll win the trial. Understand?"

"Yes," she said simply, obviously

unhappy at this turn of events.

The other player moved in above them and opened his door to listen, so Ronart leaned back into his ship and locked the door behind him. Then he looked again at the coruscating spheres of light.

After a few minutes Ronart noticed something peculiar about the six spheres he had not seen before. Each of the six had different colors in its make-up. There was a good deal of overlapping among them, but none of the six were identical.

The one above him had strong lines of silver and red as its dominant colors, with stripes of orange and yellow turning in opposite directions. To his right there marched in slow procession bands of deep red, royal blue, green and yellow, all gleaming in their march. Ahead was a ball with stripes of golden sheen, alternating with pink, blue and . . .

And it was as simple as that. Ronart smiled and then breathed deeply in exaltation. *He knew the correct exit!*

Turning his head slightly to one side, he barely nodded to Cathy. She raised her eyebrows questioningly and he nodded again in assent. He could see her body tense as she waited for his signal. He put his hand on the speed control, leaned back in his seat, waved broadly enough for the third player to see, and pulled back the throttle.

Instantly the two of them hurtled forward, straight for the ball with the golden sheen. And, almost as rapidly, the third player was upon them, fight-

ing with all his skill to separate the two of them.

Cathy's ship weaved a little and the other ship closed in a bit. Ronart smiled. Cathy was doing well. Again her flier weaved a bit out of line, and again the third player edged in closer to Ronart. They were rapidly approaching the golden globe.

Ronart waved frantically to Cathy and she made what seemed like one last, desperate attempt to catch up with him. Instead of this, she actually let the third player close his lead on Ronart completely. The trap was set.

As with one accord both Ronart and Cathy suddenly turned aside as the globe was upon them, missing its dangerous lights by scant feet, it seemed to Ronart.

The third ship streaked past them, unable to alter its course in time. And, as they turned, they were blinded by the flash.

The two of them had the gigantic arena to themselves.

They pulled slowly out of their turn and headed back for one of the nearer globes. Ronart could see that Cathy was crying, but he himself felt like singing. Now Cathy was assured of winning.

And the clue had been, as all the others, ridiculously simple when one understood. The silly, useless tailfeathers, added to the fliers for no apparent reason, had actually contained the solution to the problem.

Ahead of them lay the globe gleaming with blue, green, yellow and red circles of light. Streaming out behind their two ships as they went was

a delicate trail of shiningness, left by the blue, green, yellow and red streamers attached to the fliers. It was as simple as that.

Ronart hardly felt a qualm of fear as the two of them passed through the slashing bands of color and flew safely into the blackness beyond. He was still smiling victoriously to himself when the blackness seeped into his mind and closed his eyes.

CYCLE V

THERE was a slight noise, and Ronart awakened. He was standing in a lighted elevator. The door was closed, but the elevator did not seem to be moving.

"My child, you have come now to the final cycle of the Game of White," the Machine said, its voice coming suddenly to him from a loudspeaker in the elevator. "There are but two players left, two out of the myriad spawn that began the Game.

"In a moment the door will open and you will find yourself in a larger room face to face with the other successful player. One of you will be allowed to leave this final playing area. That candidate will have earned the right to leave the Machine and enter the world of men. The other player will be . . . disqualified. That is one of the Rules of the Game.

"In this final arena you will find two doors, both of which are now open. But they are small doors. Only one person may enter at a time. And only one player may enter either of

them. You must figure out which of them is the earthly door without further help from me.

"To the winner of the Game, I offer my congratulations for a job well done. To the other one of you, I have only regrets that you came so far for so little. But I remind you that here in the Machine, as well as on the earth itself, there is no guarantee of justice for anyone at any time.

"Even at this stage of the Game there are probably a great many questions in your minds. The answers to those questions lie behind the two open doors.

"Good luck." The Machine paused and then said quietly, "Begin now the final Cycle of the Game of White."

The elevator door opened and Ronart stepped out into the playing area. In a moment Cathy was in his arms.

They held each other close for a long time, silent, for there was nothing to be said. But each of them was thinking wildly.

Finally they turned, clasping hands, and faced the wall that had the two small doors in it.

The Machine had been correct. There was room for only one person at a time to enter either of the openings. Aside from these two portals, and the elevator doors which had closed behind them, the playing area was completely without feature.

The door on the right had above it a single straight vertical mark. The one on the left had an identical mark, and with it another, similar in style, but with strangely shaped curves. A

single mark over one door, a double mark over the other.

Ronart looked at them and knew without hesitation behind which door lay the path to freedom from the Machine. He gently squeezed Cathy's hand, released it and started quickly towards the door on the right with the single figure above it.

But if he was quick, she was quicker. Before he could get through the opening she was in front of him, her arms stretched across the door blocking his way.

"It's no use, Ronart. I've beaten you."

"Get out of the way, Cathy," he said roughly, and reached to pull her away from the door.

"Don't try to move me, Ronart, or I'll step back through the opening." His stare might have quailed a lesser person, but she hardly noticed it. "It's not fair any other way. You were the real winner, not me. I just followed where you led. You know that, and so do I. That's why you'll never get through this door."

"You're making a mistake," he said, feeling again that strange and overpowering, nameless sensation down inside him, that terrible yearning for words he did not know, for actions he could not even guess at.

"No, I'm making no mistake," she told him. "I've known all along that you would try to sacrifice yourself to save me. But I've beaten you to it. For once during this hideous game I've won something on my own. You can't take it away from me no matter what you do or say."

"Cathy, I . . ."

"The other door, Ronart, go through it quickly." She turned her head away from him. "Can't you see you can't change my mind? You're just making it difficult for me. If you stay any longer, I'll just step backwards and end it all. Go now, and at least let me face this thing in the peace of privacy."

He didn't move.

"Oh, go on! Go on!" she screamed at him.

He turned and walked to the other door, pausing to look back at her.

"Ronart," she called, her face still away from him.

"Yes, Cathy."

"When you're free, when you're out on earth, walking among those you know, when you find out the answers to the questions, remember me, will you, Ronart?"

"No, Cathy," he answered. "When you find out, remember me."

"Goodbye, Cathy."

As he moved quickly through the narrow opening, he felt the panel closing behind him. It brushed harshly against his clothes. He heard her scream as she realized what he had done. And as he walked away, down the dark corridor, he heard her pounding on the closed door and crying.

ONE to win, two to lose, his mind sang in cadence with his feet as he moved down the hallway. A symbol *one* above the right door, the symbol *two* above the wrong one. He had solved it as soon as he had seen the

markings over the openings. And now Cathy was left in the room behind with only the door to freedom open to her.

His footsteps on the hard, metallic floor echoed the rhythm of his mind's song. *One to win, two to lose*, in measured phrasing, repeated again and again to hide the fears and doubts lurking in the subterranean recesses of consciousness.

"Where are you going, Ronart?"

It was the voice of the Machine, clearer, more distinct and closer to him than he had ever heard it before. He stopped his walking.

"I asked again, 'Where are you going, Ronart?'"

"I'm . . . not sure," he said hesitantly, finally.

"Where do you *think* you're going?"

There was a pause before Ronart answered. Then he said, simply. "To 'The Plunge,' I suppose. Is there anywhere else?"

"There is earth, Ronart. Why are you not going towards earth?"

The Machine should have known the answer to that. But he said, "That is for her, now—for Cathy. I want no part of it."

"And what was the clue, my child, that told you which of the doors was the right one? How did you know which to choose?" The words were soothing, quieting to his fears.

"One to win, two to lose, I guess. There could be only one winner, only one path to the one earth. Therefore the door with the single mark over it was the correct one. I left Cathy there

with that door."

The voice of the Machine seemed to come from inside him now, caressingly personal and familiar in its tone.

"My child. You have made an error. The two conditions necessary for the creation of human life, though you did not know it, are man—and woman. Two conditions, Ronart, not one. That was the clue.

"You are the winner of the Game of White, Ronart. And it is Cathy who must be disqualified."

Ronart screamed!

Turning around, he started running back towards the door.

"Where are you going, Ronart?" asked the Machine, its voice running with him.

"Back to Cathy," he cried. "If she can't win, neither of us will win!"

"That is impossible, my child," the Machine said as he reached the metal panel separating him from Cathy. He could hear her sobbing gently through the door. He seemed so close to her, and yet so far away. He began to pound on the thin panel.

"That will avail you nothing, Ronart. Turn around and walk back down the corridor that leads to the freedom of earth."

"I won't do it!" he shouted back at the Machine. "If she can't win, I'll stay here until you have to disqualify both of us. If you make me go on, I'll disqualify myself somehow. And if I can't do that, once I get to earth I'll spend the rest of my life fighting you, trying to destroy you. Do you understand? I'll destroy you and all

the evil and horror you stand for!"

"That is your final decision?" asked the Machine.

"It is," said Ronart, in tears.

"Then stand back from the panel."

Ronart took a step backwards. There came a sound of rushing air and the door opened. He rushed into the room, catching Cathy in his arms. Somehow she seemed to understand what was happening.

"You shouldn't have done it, Ronart," she said, her voice a mixed torrent of love and fear. "Now neither one of us will ever know the answers."

"And you, too, are wrong, Cathy," intoned the Machine. "This is not the first time this situation has come up, although it is rare. But according to the Rules of the Game, only one can win; if the winning candidate refuses to leave the Machine, preferring to sacrifice himself for the sake of one of the opposite sex, the Machine recognizes the fact of their unselfish love, and as is the custom in the world outside the Machine, will recognize the oneness of the pair provided they undertake to assume the vows of marriage and fidelity before passing through the door to the freedom of the Outside."

Ronart and Cathy, wild hope in their eyes, looked at each other while the voice went on:

"Ronart and Cathy, do you agree to Oneness? Do you agree to become one, to enter the outside world as one, and to remain as one until you die?"

As one the couple cried out: "Oh, yes!"

"Then you are one," intoned the Machine. "And now, my children, come."

Ronart hesitated but a moment. He lifted Cathy's chin and kissed her on the lips. Fervently she flung her arms about his neck and returned the kiss. Then, arm in arm, they turned and walked back through the door with the two vertical marks over it. Soon the corridor seemed to widen. The darkness was replaced by the beginnings of light, glowing in pulsating pattern. Then suddenly they were Outside!

CYCLE VI

THE woman pushed open the swinging door and walked into the room. On one of the long, low couches a man was stretched out, asleep. His feet rested on a little table in front of the couch. There was a litter of well-thumbed magazines and the ashtrays were overflowing on the table.

The man was obviously in need of a shave. The darkness of his incipient beard stretched up to a sharp, haggard discoloration around his closed eyes.

The woman moved over beside the couch and shook the man by the shoulder. "Wake up; it's come," she told him. Her voice had the same sort of starch and crispness to it as her white uniform.

He looked up, startled, suddenly awake. "Is it . . . has anything happened?" he asked quickly. "Is Cathy . . .?"

She smiled at him softly, woman-like, with warmth. "It's all right. She's going to be all right."

He shook his head as if to clear it. Then he said, "And . . ."

"And you're a very lucky man," she told him. "It's twins, Mr. White. Two beautiful boys. The Machine will be happy to know you've passed your final test. It means that the day when Man will have regained his

complete fertility is that much closer, and the Machine can cease the function for which it was created after the Final War."

He stood up exultantly. "Born alive! Outside the Machine! And not one, but *two*!"

"We are winning the battle," said the nurse. "We are becoming strong again!"

THE END

The COMING *of the* SAUCERS

By

KENNETH ARNOLD and RAY PALMER

Ever since Kenneth Arnold first saw the mystery disks, the utmost confusion has existed — due to official and unofficial censorship, hoaxes, false reports, biased analyses, publicity hungry yellow newspaper sheets and sensation magazines, military investigation, "classification" and "top secret" designations. Now this "smog" of misinformation is cleared away, replaced by facts, by the two men who know most about the disks.

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POWER METAL

By S. J. Byrne

SYNOPSIS OF PARTS I AND II

LARRY BUCHANAN is descended from a long line of pioneers who helped settle and develop a colony of Earth people on the large planet, Teran, belonging to the planetary system of Alpha Centauri. Inasmuch as Teran has half again the mass of Earth, the resultant descendants have made an adjustment to environment resulting in greater physical strength and a much greater stature than their contemporaries inhabiting the governing system of Sol. Moreover, a careful system of selective emigration to the colony of Teran has resulted in a superior race of men in terms of intellect, training and personality, although they are in the minority in the ratio of twelve million Teranians to six billion Earthman inhabitants of the Sol System.

Buchanan, a spaceman in the Alpha System, has always dreamed of taking the "big hop" to Sol, a six year journey, one way. His life long acquaintance, Vincent Cardwell, becomes more than a spaceman. In fact, Buchanan's view is that Cardwell has the "Midas touch," that everything he touches turns to gold. Subjectively, Buchanan resents Cardwell's more powerful and decisive personality and calls him "Vincet the Invincible." When Cardwell rises to become controlling stockholder in the Carlona Corporation, an interstellar shipping concern, this deepens the subjective schism between the two, but when Buchanan returns from a work assignment on the four moons of Teran

to find that Cardwell has married Anne, his bitterness is complete.

The Central Government on Earth has become completely dictatorial, especially in regard to Teran. The chief bone of contention suddenly appears in regard to a new element, cosmium, which promises a whole new era of advancement because of its tremendous yield of nuclear energy—far superior to anything previously discovered. Central Government is exploiting the Sol System's cosmium resources and plans to exploit the Alpha System under strictest supervision, all cosmium production to be returned to the Sol System for safe keeping and controlled distribution. A recent immigrant from Earth, Howard Lydecker, becomes leader of an underground Independence Party and plots revolution. Cardwell secretly plans to apply his Midas touch even to this brave dream of his people, unknown to Buchanan. The single interstellar ship belonging to his corporation, the I.S.S. Carlona, is to play one of the most strategic roles in the unfolding history of the Teranian Revolution. Cardwell is her skipper and Buchanan is the Assistant Engineer.

On the eve of departure for Sol, Buchanan stays at Cardwell's home, tension develops over the fact that Anne is still in love with Buchanan, and the two have a secret meeting during which Buchanan promises to return from Sol and help her get a divorce from Cardwell and marry him. Cardwell is aware of the clandestine affair and is frustrated prin-

cipally because Anne is one object his Midas touch cannot affect. On their way to the spaceport next morning, he and Buchanan have a hot argument over the total situation. Buchanan accuses him of having personal stakes in the revolution; he says that Cardwell's willingness to leave Anne and her infant twins for twelve years points to a greater personal goal attached to the voyage of the *Carlona*. The result of the argument is that they make a grudge pact to the effect that only one of them is going to return to Teran.

The part the *Carlona* is to play in the revolutionary plot is to hi-jack the cosmium and return to Teran, thus placing the revolutionists in a position to bargain for freedom. At the last moment a complication arises when the Colonial Governor, John Pomeroy, requests passage on board the *Carlona*. It becomes obvious that during the six year voyage to Sol they either have to get rid of him or convert him.

En route, they learn that a new Teranian governor replaced Pomeroy, a Governor Wainman, backed by additional troops for the colonial garrison. The voyage of the star ship, *Carlona*, continues, and in the meantime there is the matter of the secret grudge pact between Buchanan and Cardwell. When an opportunity presents itself for Buchanan to let Cardwell die, on one occasion when they are out in space in suits and Cardwell drifts away from their work raft, Buchanan finds he can't kill Cardwell. He has a built-in complex that recog-

nizes Cardwell as the superior personality. Cardwell laughs at him for his failure and tells him he is incapable of the clear, clean stroke of decision.

One result of their strange duel is that Buchanan had to use a small, secret ship to rescue Cardwell, a ship which had been stowed away without the Governor's knowledge, and which carried a secret weapon necessary to the success of the planned raid on Martanium. Once the "cat" is out of the bag, they have to imprison Pomeroy, but Cardwell thinks he can be converted to their cause.

During the voyage, Buchanan acquires two close friends: Peter Puckett, and William Hausfek, a celebrated authority on nuclear energy. The three of them agree that something about the voyage of the *Carlona* does not ring true. They suspect that they are being used as pawns, along with Lydecker, the leader of the Independence Party, in a much bigger game, some hidden Master Plan that smells of Empire. Buchanan suspects Cardwell of duplicity but is not sure he is the Master Mind. The three men secretly discuss the scientific problem of interstellar flight, lamenting the limitations of matter when approaching the speed of light, owing to the sudden increase of mass when approaching C-velocity. Hausfek lets them in on a secret theory of his, involving the possibility of a revolutionary type of space drive that might lead even to intergalactic travel. But for his experiments he needs cosmium—the Metal of Power. Realizing that

such a space drive would place Teranians in a distinct position of advantage over the Sol System's ships, they agree to keep the whole thing secret.

When they get within hailing distance of the Sol System they receive a message from a Solar Patrol cruiser instructing them to make a rendezvous with it in twenty-one days along their present course and to prepare to be impounded for investigation in connection with alleged subversive activities. All too smoothly, Cardwell revamps their plans and replies to the Patrol cruiser that they will follow instructions. He tells the cruiser, however, that he is aware of the nature of the investigation, that the guilty parties were apprehended and killed resisting arrest, as witnessed by "Governor Pomeroy." To make it look good, Puckett and Hausfek are to disappear before the rendezvous with the Patrol ship. At first it was planned to plant their little secret ship, the *Surprise*, on one of the asteroids of the "Belt" beyond Mars and keep it there until they needed it for their raid on the cosmium mining colony of Martanium, at which time it was to be brought in by remote control. But now Puckett and Hausfek are to man the little ship personally. This will serve the double purpose of hiding the strategic little ship and getting the supposedly dead conspirators out of sight when they meet the Patrol ship.

Buchanan accuses Cardwell of being too smooth about the whole thing, and of being connected with some

Master Plan. They have a physical struggle which is interrupted by Governor Pomeroy, himself. Pomeroy is the Master Mind. His goal is cosmium—Metal of Power—and dictatorship over both solar systems, with Cardwell as one of his right hand men. He says Buchanan, too, must accompany Puckett and Hausfek on the *Surprise*, and assures him he will do exactly what he is told to do or end up being executed by Central Government as a rebel.

The *Surprise* departs for an asteroid, with Puckett, Hausfek and Buchanan aboard. The *Carlona* meets the Patrol Ship at the appointed time, but Pomeroy and Cardwell and Buchanan's buddies on board the star ship are surprised to learn that the *Surprise* has doubled back and captured the Patrol cruiser with its secret paralysis weapon. Pomeroy and Cardwell are taken prisoner by Buchanan, Hausfek and Puckett, and the rest of the *Carlona's* crew are informed of the Master Plan that was using them as pawns. The crew favors doing away with Pomeroy and Cardwell, but Buchanan, again, can't kill Cardwell. He offers an alternative plan. The crew of the Patrol ship are put aboard the *Carlona* in a paralyzed state which will wear off shortly. The Patrol ship captain is given a note to be read when he comes to, to the effect that the real conspirators are Cardwell and Pomeroy, as may be proved by the method of sub-psych-monitoring. Cardwell and Pomeroy are left on board the *Carlona*, in the ship's brig, and the rest leave on

board the Patrol ship, towing the little Surprise behind them on magna-beams.

The rebels park the Patrol ship on an asteroid to be used in making their getaway to Teran. But first there is the matter of the cosmium haul from Martanium. They go to Mars in the Surprise and succeed in taking the colony over with their paralysis weapon. They also shanghai a renowned specialist on the subject of cosmium, a Dr. Fernandini, and start back toward the asteroid where their companions are waiting to transfer the cosmium to the Patrol ship. They have learned, however, that the Solar Fleet is based at present on the Earth's Moon, for maneuvers, and they conceive of a "Pearl Harbor" maneuver with the Surprise, using cosmium torpedoes taken from Martanium. To blast Luna will be a kamikaze run, because the stolen Patrol ship must leave for Teran to avoid pursuit. Volunteers will be chosen by lot to take the Surprise to Luna.

En route back to the asteroid they receive a message from Pomeroy in which he announces that half the Solar Patrol was on his side in the first place and that he is quite in control of the situation which they thought was going to be a trap for him. He sarcastically thanks them for stealing the cosmium from Martanium, as that is also a part of his Master Plan to overthrow Central Government and take over. Buchanan is terribly affected by the realization that it was his complex which prevented the crew from doing away with

Cardwell and Pomeroy. He is determined to make the kamikaze run to Luna in the Surprise.

After the cosmium is loaded onto the Patrol ship, Puckett, Haushek and Buchanan take the Surprise and two cosmium torpedoes and head for Luna at top speed. They succeed in blasting the Lunar Fleet Base and crippling the Solar Fleet badly. However, under the heading of incompetence the loss of the Lunar Base merely becomes another political brick for Pomeroy to throw at the present government, and he pulls his great coup d'etat, installing himself as dictator of both solar systems. Cardwell is appointed Admiral of the first Interstellar Fleet, to be built at once. He captures the Surprise, using the interference generator against the Teranian paralysis weapon. He outlines to his three captives the further phases of Pomeroy's Master Plan. The hi-jacking of the cosmium from Mars and taking it to Teran is just what they want. Governor Wainman, on Teran, is in on the Plan. He will overcome Lydecker and take the Patrol ship over when it arrives, holding the cosmium there as a bargaining point for Pomeroy to use with the Central Government's military factions. Thus the heroic efforts of the rebels have been expended merely to place the Metal of Power in the hands of their greatest enemy.

Remanded into the custody of Central Government, Buchanan loses contact with Haushek and Puckett. In the meantime, Cardwell takes the Interstellar Fleet to Teran to back up Wainman and collect the cosmium,

and to smash Lydecker and the Independence Party. What appears at first to be a minor item of news is Lydecker's increasing use of the indigenous people of Teran in his struggle—the harmless little humanoid Alphids.

Buchanan spends thirteen years in prison on Earth, nursing his hate for Cardwell. His personality changes subtly as he hates and thinks. He swears he will never be free of the prison of his own self until he can overcome his inferiority complex in relation to Cardwell by killing him.

Finally he is sold into slavery in a Venusian colony, where he is to work in a uranium mine, with a short life expectancy. By attracting the attention of the Venusian Governor's daughter, Lorena Forral, he becomes production manager, though still a prisoner. In the mines he meets his old friends Haujek and Puckett and other Teranians he knew back home, and he makes many friends among the Earthman prisoners. He violates every rule, throws a party for the men on Lorena's liquor, and they plan to escape. The upper level Venusians, the tall, sturdy Braburnii, want to work with them to effect the escape, especially that of Haujek, whom they consider to be a great medicine man. Ahahdd the Great, the highest chief among them, living with his tribes in a hidden land adjacent to the continent of Hahddra, where the mines are, offers a means of escape to his country—boats and crude oxygen equipment, with which they can hope to penetrate the lower levels, char-

acterized by a CO₂ atmosphere, and cross the ocean channel. There is one condition. They must bring to him his sister, Aarri, who is the half-sister of Lorena Forral. She has been held on Hahddra by her half-sister because of certain information she has in connection with the legends of the non-human lower level Venusians who live in the CO₂ belt—the mysterious Gaggandii. Aarri is guarded by a gigantic upper level Venusian named Drukh. He is jealous of any man who goes near her, and particularly of Buchanan. As circumstances develop, Aarri falls in love with Buchanan, but he never forgets Anne, back on Teran, to whom he promised to return.

All is set one night for the exodus of the prisoners, and native Braburnii are helping the prisoners to assemble the necessary equipment for the escape down through the CO₂ belt and the lower levels. Latest news from Earth and Teran is that Cardwell was repulsed on Teran by Lydecker and The Alphid. It seems that the racial instinct of self-preservation among the Teranian Alphids has brought out a psychological mutation in them. Consciously they are individuals, but subconsciously they are a single entity, a super mentality that brings to Mankind grave forebodings concerning the future status of homo sapiens in the universe. Cardwell is building a vengeance fleet with brand new weapons. This time Teran is to be wiped out. Haujek and his friends only have a few years to build Haujek's new type ship if there is to be any hope of helping Terdn to defend

itself. The prisoners hope that in the hidden land of Ahahdd the Great they may be able to achieve this goal.

Buchanan goes up the mountain to get Aarri, but runs into Lorena Forral. She reprimands him for his infractions and sends him to his quarters, where she starts to horsewhip him. He takes the whip from her and returns the punishment, then kisses her. She tells him to wait for her and she will return to him when she takes care of her wounds inflicted by the whip.

While he waits for her to return, he plans to get her out of the way. Aarri comes to him, professing her love for him and telling him not to trust Lorena. He must take her, Aarri, away with him.

Lorena returns abruptly with Drukh, and Buchanan and Aarri are discovered in each others' arms. Drukh comes lunging into the room bellowing with rage, and Lorena orders him to kill Buchanan.

Now go on with the story.

CHAPTER 19

AS Buchanan lunged to his feet to meet Drukh's bellowing charge he saw Aarri dart toward the whip, which still lay on the floor of his room. Lorena ran to intercept her, but he was suddenly too much occupied with the freak Venusian giant to watch the struggle between the two half-sisters.

As Drukh loomed upon him ponderously, his gigantic hands reaching out to crush him, he planted a blow in

the other's solar plexus with all his might. Although Drukh weighed more than three hundred pounds, Buchanan's two hundred and seventy-five pounds, backed by muscles hardened by a greater gravitation than that of Venus, had an effect which no "Earthworm" could have produced. The Venusian grunted and doubled over, hitting the bed and breaking two of its legs. Only vaguely aware of a furious battle going on between the two women, Buchanan leaped through the air, landing with his knees in the middle of Drukh's spine and striking his thick neck with a rabbit punch.

The giant bellowed in sudden pain and rage, shook his head and rolled over, sweeping Buchanan with him, bringing his superior weight to bear against him. The Teranian squirmed loose from his thick arm and got to his feet. As Drukh surged upward, Buchanan struck him square in the face. Drukh staggered, shook it off, and came at him, squaring his chest and spreading out his sweating arms like a wrestler.

"You going to pop like a beetle!" threatened Drukh.

"Now who's talking too much!" yelled Buchanan, and he gave him two straight bodied uppercuts to the chin.

He followed this with more swift blows, to his nose and his eyes. Drukh bled, deliberately taking the blows, but moving in all the time like a slow avalanche. Suddenly, Buchanan found himself against the wall and the Venusian embraced him about

his waist in a titanic bearhug, his bleeding face leering in triumph as he strained to break his opponent's back.

A great iron wheel seemed to be rolling slowly across Buchanan's back, gradually applying pressure that would soon crack his spine. Blood shot to his head bringing pain and dizziness. His hands found Drukh's throat and a contest of sheer strength and endurance developed. Sweat, heat, blood and hate. Drukh was full of dumb, brutish hate, but Buchanan hated this stupid obstacle in the way of vital success involving his companions, who were waiting down the mountain for him. And he was desperately wary of his life. He choked that great neck with all his Teran born strength, while waves of blackness swept over him intermittently and Drukh's big, battered face loomed in discolored suffering before him.

Then he kneed Drukh and the giant released his grip with a howl. He punched blindly at the Venusian's mid-section. But it was then that Drukh landed a double-fisted blow on his chin and the world exploded in his face. His head struck the wall and he sank to the floor. Drukh picked him up and struck him again. Each blow was like a battering ram, mangling his face. The room raced around him in circles and he tasted blood in his mouth.

With his legs, he managed to trip the giant, and he fell, shaking the room. Buchanan made the mistake of getting on top of him, of trying to batter his face into a pulp. Massive

hands grasped him and rolled him over onto the floor. He tried for a wristlock but sweat was a handicap. The grip slipped and Drukh struck him on the back of his head. He sprawled out onto the floor and it seemed a black pit was trying to open up and engulf him. He wished it would, because the fight was out of him even though the will to resist was still there.

Suddenly, he was aware of Drukh's screaming. It was weird to hear that massive giant scream. He shook his head and looked up. As his vision slowly cleared he saw Aarri using the whip on the Venusian. She whipped him as furiously as Lorena had whipped him, drawing blood. It seemed that Drukh was instinctively afraid of whips. He cringed by the bed, on his knees, holding his hands up before his battered face. Lorena lay near the door, unconscious.

Buchanan was surprised to read the hate that was in Aarri's *Braburni* eyes as she swung her whip. She was probably repaying Drukh for a dozen whippings he had given her and at the same time releasing all the venom that her enforced imprisonment and life-long mistreatment at Lorena's hands had generated. But he knew that when Drukh conquered his instinctive fears and realized that it was only a woman who attacked him he would rise and take the whip from her. So he got to his feet and stopped her. As Drukh straightened up, still on his knees, and started to evaluate the situation, Buchanan came close to him and stared down at him, waiting

for him to make a move. Drukh started to reach for him, but in a single flash of swift motion he clasped his hands over the back of the giant's head and brought his knee up under his chin with all his might. As the other slumped, falling on his face, Buchanan took the whip from Aarri. Its base was of thick, heavy leather, heavier than a blackjack. Gritting his teeth against the inner cry of conscience, he brought the improvised weapon down with all his strength. Drukh lay very still in his own blood.

"The poor, dumb—brute!" Buchanan gasped.

"La-rwee!" cried Aarri. "Your face—it is broken!" She stared at him, crying with her eyes wide open and her mouth agape, lips trembling.

Buchanan raised a hand to search for his nose in a face that had lost its feeling. Quickly, he brought his hand away and looked at bloodied fingers. As he swayed, dizzily, Aarri came to him swiftly and gave him support, leading him to the bed. He lay there gasping for breath, fighting a sudden surge of nausea and knowing that he was bleeding too rapidly.

"Is there—first aid—equipment?" he asked. "Get—bandages." After that he passed out.

When he came to he found Aarri bathing his swollen face in some kind of medicated water. He knew it was supposed to hurt but he was only aware of a dull, far away ache in the middle of his face. His nose was badly broken.

"Where is Lorena?" he asked, finally.

"She is locked in your closet."

"Then—you didn't kill her?"

Aarri searched his lacerated face warily. "You want me to kill her?"

"No. That is, I—"

Aarri's eyes narrowed. "You love Lorena, La-ree?"

"Hell no! I just don't believe in killing." Except one man, he thought, with a twinge of real hate, as he remembered Cardwell. "Drukh is dead. That's enough. But I wonder what we're going to do with her. If we merely tie her up—"

"If we go to my brother, Ahahdd the Great, we hold her there, prisoner."

"You mean—as a hostage?"

"Yes. Make Enrique Forral give us what we need—white man's magic."

Buchanan sat up weakly to receive the bandage she had prepared for his nose. "That is not our plan, exactly," he told her, as she applied the bandage. "We hope to fool the Patrol and make them think they destroyed all of us in the Sea of Darkness. If they thought Lorena was with us—"

Aarri's eyes lighted with hope. "Then, you are ready to go to Ahahdd?"

"Yes. Everything is ready. We have to go now. But what about Lorena?"

Buchanan got up and opened the closet. Lorena stood there staring at him. She wore another two piece pajama, this time of light blue plastiglas that was equally revealing, particularly in view of the fact that it was half torn as a result of her struggle with Aarri. Her long, dark hair hung down

her side to her waist. In her hazel eyes he read genuine concern for him.

"Oh Larry, your face!" she cried out coming into his arms. "It's all my fault. I'm so sorry. I'll do anything—"

"You get away from La-ree!" exclaimed Aarri furiously pushing her back into the closet. As Buchanan stared at the half-breed girl, wonderingly she added, "Don't trust her. La-ree. She is evil!"

"Larry take me with you," said Lorena. "I'll help you!"

Buchanan tried to sneer with his swollen lips. "Like hell you would! But I'll take you."

"No. La-ree! Why you take her now?"

Buchanan turned again to Aarri. "That was your idea, wasn't it? We can't leave her here, and we can't kill her."

Aarri ran to one corner of the room and snatched up Lorena's dagger. Raising it she charged Lorena. "I can!" she cried, glaring hate at her half-sister. But Buchanan caught her arm and held her. Lorena refused to even give a sign that she was aware of her presence. She kept her eyes on Buchanan. "You cannot fool him!" screamed Aarri, still trying to get at her. "You with your Earthwoman face and demon body and heart of poison, with the full blood of our father in you! You not have this man like all the others! What you know of love—*daslahahdd'hai*!" The latter was some epithet that was without meaning to Buchanan, but it evidently had plenty of meaning for Lorena.

"You little—" Lorena lunged for Aarri with her nails, her teeth flashing in rage.

Blood would have been spilled again if Buchanan had not pushed them apart. "Cut it out, you two!" he exclaimed. They paused, staring at him. "We've got to get moving! That damned Patrol ship will be here any minute if the monitors are still working."

As they left the room, Lorena met Aarri's fiery stare and laughed with her eyes, behind Buchanan's back.

PUCKETT and Larry Pyle met them at the lower magnatram station, as all the rest were gathered with the tribesmen at the upper level point of departure, around the mountain. The second shift had not ended; the men had simply left their posts when Buchanan signalled from the crater that he was on his way down.

When Puckett saw Lorena and the bandage across Buchanan's battered and lacerated face, there was little left to tell of the story that he could not surmise.

"Cripes!" he exclaimed. "You must have run into Drukh."

"Yeah. He's off our list—but the Patrol Guards aren't. Let's move!"

"But—what's with the Witch? Why bring her?"

"She'll be less trouble with us than stirring up trouble behind us. Let's go!"

Buchanan led the two women onto the jungle trail, followed by Pyle. Puckett paused for one brief moment to watch his red-headed friend, won-

deringly. His eyes narrowed in thought for one moment. Then he followed them.

The point of departure presented a shadowy scene of preparation that none of the participants would ever forget. Although it was night and they dared not reveal lights to the danger laden sky, there were a few shielded points of illumination consisting of native oil lamps under thatched canopies and their eyes soon adjusted themselves to their environment. Earthmen, tall Venusian warriors, and taller Teranians moved back and forth to their appointed tasks, collecting and arranging equipment for the carrying parties. Several *Braburni* medicine men danced silently in ceremonial designs they had painted on the ground and burned strange incense before the images of their various gods, while four tall chieftains in their war hides stood watching or giving instructions to their warrior aides.

Buchanan turned Lorena over to a detachment of Earthman miners for safe keeping and went to find Haufek, accompanied by Puckett. The scientist was busy making final adjustments on his "gimmick," which was to fool the Patrol ships. It was a thermatron powered magnabeam absorption field generator, capable of absorbing the electromagnetic radar waves in such a manner that they would reflect back to their source with a minimum of distortion.

"We'll tow a few dummy rafts way behind us," he explained, "and when the Patrol detects them they'll blast

them out of the water and, we hope, report that we were all killed."

"There's just one fly in the ointment," put in Puckett. "We've got Lorena Forral with us. If the Patrol knows that they won't fire."

"In that case we'll release the rafts farther out and perhaps put a propulsion unit on one of them and have it tow the rest in another direction. They'll follow, but when they find out the rafts were decoys we'll be out of harm's way."

It was only then that Haufek noticed Buchanan's bandaged face. He stopped and stared, but before he could say anything Herb Dobson and Lee Salkin interrupted.

"Hey Larry!" Dobson exclaimed. "We're about ready to go and Chief Didjandu wants to see you."

Aarri was already there, talking to the chieftain in *Braburni*. She acted as an able interpreter and seemed to be very proud about the whole thing. Now that she was close to her "other blood," her more savage personality had begun to reveal itself. She stood beside Buchanan as though he were her mate.

Chief Didjandu and his three colleagues silently observed Buchanan's face, at first, with a stoic lack of expression. Then Didjandu spoke, in solemn tones.

"Son of Fire, Slayer of Drukh. Now you are a warrior," Aarri translated. Evidently the killing of the ogre of the mountain was equivalent to the slaying of Goliath. His fame had gone before him. Aarri had not tarnished the tale of heroism with a

recital of her own contribution to Drukh's demise, and thus a warrior's legend was launched. Buchanan grinned back at the chief through swollen lips.

"You have brought Aarri, blood sister of Ahahdd the Great, and your journey begins," continued Didjandu. "In the Land of Ahahdd, you make blood brother with *Braburnii*. Haoo-fehk great medicine man, teach white man magic. Other white men *Braburnii* kill and drive out. So speaks Garlanath, God of Wind and Sky." Thus Didjandu went on, ceremoniously, while Buchanan itched to be on his way; yet he hesitated to insult the tribesmen by disrupting tradition.

"But one thing evil omen," said Didjandu, finally. "You bring Witch Woman. While she live, evil live and follow you."

Buchanan knew Aarri was watching him closely now. So he said, "Aarri, sister of Ahahdd, is wise. Lorena is daughter of Enrique Forral. Aarri says we hold Lorena as our protection."

Aarri translated this with some hesitation. Didjandu studied Buchanan closely.

"Witch Woman have demon fire in her body," the chief replied. "This magic twist the eye of man and he see not what trail he follow. Aarri is woman. She wise but not warrior. What warrior say?"

It was good repartee for a Venusian jungle inhabitant. Buchanan sharpened his wits with a mental exclamation of "Touché!" He entered their own ceremonial pattern by straight-

ening up in a stern attitude of lofty pride. "I am not a warrior," he said. "I am a chieftain! Ahahdd the Great requests a warrior's test be passed to rescue his sister, Aarri. This I have done, but it is not enough. Ahahdd should know whom he brings to his camp. Son of Fire is not only the Slayer of Drukh. He bring great white chief's daughter to throw at Ahahdd's feet!"

Aarri was roughly torn this time between civilized suspicion and savage pride as she translated. The eyes of all four Venusian chieftains lighted up with enthusiasm and understanding. Buchanan enjoyed a mental chuckle. Ever since monkeys were born, the jungle loved a braggart. To these savages, his bold statement was incontrovertible.

"A warrior chief has spoken," replied Didjandu. "It is good. And now you go, with power of the gods."

Aarri followed him possessively as he turned and made his way toward the others.

CHAPTER 20

THEY wore hip boots made of woven fibre by the tribesmen, to protect them from unpronounceable and often unnamed crawling horrors of the lower world darkness. They marched in single file and in groups of five, which was a strong symbolical number among the *Braburnii*. But there was a more practical reason for the grouping. Each group of five carried an oxygen "sleeve" that enveloped them, as though they were bear-

ers of a Chinese paper dragon. The sleeve was also of a woven material and gummed over on the outside with some vegetable substance similar to unvulcanized rubber. Each bearer carried on his back a cluster of hollow gourds capped with the equivalent of a wooden whistle, which was a crudely adjustable valve, held on by tough plant fibres. Chemicals placed inside the gourds generated oxygen and built up pressures which relieved themselves through the "whistles" whenever they reached a critical point. When the whistles ceased their faint wailing, like an archaic popcorn wagon, the bearers would wiggle their shoulders and shake the chemicals a little more, and soon the elfin whistling returned. Thus had the Venusian savage proved his adaptability to environment. Earthmen and Teranians, ten thousand years advanced beyond the *Braburnii*, were the beneficiaries of this primitive technology. With it, they entered a world not made for man, a dense, cloying, humid world of carbon dioxide and sulfuric gases. Somewhere below, boats awaited them on the Sea of Darkness.

Buchanan was leading one group of five, which meant that he was also the eyes of the group. Behind him were four Teranians—Puckett, Haufek, Eckert and Kefler—inasmuch as the mixing of Earthmen and Teranians in one sleeve would have given rise to some problems of height distribution. Ahead of him was the only group of tribesmen accompanying them. These were their guides. On

the back of their sleeve they had painted a phosphorescent substance which glowed sufficiently through the murky atmosphere of CO₂ for him to see it. No torches would have burned here.

Through a small slit of mica set in the rubbery goo that covered the oxygen sleeve, he watched the ghostly glow of the guide's sleeve and tried to take up any slack in the guide line tying them together, so that no one would trip. How the guides, themselves, found their way he left to their gods to figure out. He only hoped they would reach the boats before somebody's oxygen supply gave out. The trail was steep, which was a consolation as well as a disadvantage, because the faster they descended the sooner they would reach the sea.

Inasmuch as their arms protruded from the sleeve, they could handle spears. They held these in readiness, though they could not understand of what use they might be in this deadly gloom where nothing could be seen. Once in a while they heard animal noises, coughing sounds and low, rumbling trumpetings. Once a web of roots came alive and sought to ensnare them, but they followed previous instructions. Clay jugs hung at the sides of the sleeves. These they opened and poured on the roots. The native manufactured acid soon made the root webs curl back into the soggy brush. On another occasion, Buchanan heard the native guides yell, and he was forced to come to a stop while the Chinese dragon ahead of him thrashed madly about. Another

jug was spilled, and a phosphorescent liquid splashed against some obscene crawling thing the size of a bushel basket, making it a clear target. Buchanan knew that of the ten men in the two sleeves only he and the lead-man could see, so he came in with his spear and helped kill the thing.

"Stay clear!" he heard the lead-man say, in a muffled tone. "Poison!"

Buchanan's stomach quivered in strange revulsion as he fought the writhing mess near his boots. It was a rolling, quivering mass of slimy mouths among which crawled detachable tendrils, like so many worms. A myriad of spiked tongues darted incessantly from the mouths, which he surmised were poison bearing barbs. When they had mauled it enough so that it lay still and the worm-like tendrils seemed to be shriveling and dying, Buchanan shouted at the lead-man and asked what the thing was called.

"Daslahahdd'ha!" replied the other.

As they moved on down the trail, Buchanan remembered that this was what Aarri had called Lorena and he suppressed a grin in the darkness to spare his swollen lips the pain. What more despicable and lowly form of life could be referred to when searching for an approbrious epithet?

"Man!" ejaculated Puckett behind him, after Buchanan described the creature. "You talk about Dante's Inferno. Hell never heard of this place!"

When they reached the calm and tideless sea they found ten boats and

four rafts. The boats were of light construction for carrying up out of the CO₂ belt, but they were surprisingly roomy. Woven matting caulked with the same rubbery substance as was used on their oxygen sleeves was stretched across a clever framework of warped wood, forming long hulls with a beam that compromised neatly between seaworthiness and speed. To the gunwales were fastened long sleeves of matting which were stuffed with hollow gourds, a wise provision against capsizing. Each boat was equipped with wooden hoops like a covered wagon, over which more caulked matting was stretched. Once the passengers were inside this matting could be closed tightly and a battery of oxygen gourds could be set in operation. Propulsion was provided by a chemical gas generator which possessed jet-like exhausts below the water line. The pilot of each craft was provided with sacks of a chemical which, when dropped down the tube of the generator, caused gases to form which emerged under considerable pressure from the exhausts and pushed vigorously against the dense, chemical laden water. Steering was accomplished by means of a cumbersome double rudder. One great blessing was a coating of phosphorescent paint on the inside of each boat's oxygen cover, so that illumination was available without the necessity of burning up valuable oxygen and filling each boat with oil smoke.

There was very little opportunity for conversation under the difficult circumstances produced by their en-

vironment. Two five man sleeve groups went into each boat, the *Bra-burni* guides accompanying Buchanan and his four companions. Buchanan had no chance to walk around and inspect each boat like a proper chief-tain. There was no provision for solo operation in the dismal country of the as yet unseen *Gagandii*. He could only assume that the two women had been put aboard. He knew that they had gone together in one sleeve accompanied by three of the Earthmen, and that Aarri, at least, would certainly manage to get aboard. If she had not succeeded in drowning her half-sister in CO₂, then Lorena, too, was still with the expedition.

The lead boat, which was his, shoved off, dragging towline with it that would soon be pulling a raft decoy at a safe distance. Haufek was busy tuning up his "gimmick," but he paused to hand Buchanan a compass.

"Our leadman speaks some English," he said. "Maybe you can argue with him. Half their seagoing expeditions disappear because they rely on reading the currents and praying to their gods. Tell him this is some of the gre-e-a-t Haoo-fehk's whiteman's magic."

"But—what would be our course?" asked Buchanan.

"If we can believe their primitive painting on the ground that they call maps, I'd say the Land of Ahahdd is due South of here and about seventy kilometers away. This sea is merely a large channel between two continents."

"What about current drift?"

"That's probably where they get lost. Enough lateral drift and poor speed, and they're heading into the lost horizons."

"We'll have to rig up some kind of speedometer and watch the angle of our towline on the rafts. Maybe we can figure an equation that can guide our course."

"One thing for sure," said Puckett. "You're sure as hell not going to navigate by the stars down in this soup!"

Stars : . . Five Teranian spacemen looked at each other in the ghostly phosphorescent light of the hooded boat. An inexpressable longing for the great, clean, fiery gulfs of interstellar space assailed them all. The thin wail of the oxygen whistles began to give them claustrophobia. Danny Eckert cursed, which seemed to express the sentiments of all five of them.

"Haufek, do you honestly think we've got a goddam chance in hell of building your space ship?" Keffler asked, suddenly.

Haufek was busy over his "gimmick." Finally he answered without looking up. "Given *enough* hell, we might make it."

HELL came from all sides, as if in answer to Haufek's pessimistic remark. The guide lines tying the boats together became fouled. Inexperienced Earthman or Teranian pilots either steered into other boats or applied too much or too little of the gas generating powder to the propulsion tubes. With no satisfactory

means of communication available. the traffic evolved into something resembling a Gordian knot. Some of the boats actually climbed up onto the rafts which were supposed to trail far behind.

The *Braburni* guides in Buchanan's craft came to the rescue here by skillfully bringing their vessel out into the lead and, by a process of accelerating in tugging spurts, they indicated to others which direction to take. When they finally became sufficiently untangled to proceed at a normal rate, there was no way of telling whether or not all boats were accounted for. Some might have broken their lines or sprung leaks. Others, having been rammed in the sides, may have sprung leaks in their oxygen hoods. In fact, once they heard a muffled sound of violent coughing and wheezing, and at another time they heard a distant scream of agony. There was nothing to do but go on. And through it all they sweated in their confines, feeling clammy and panting slightly for air, fighting against their encroaching claustrophobia and wanting to yell, fight or die—anything to escape the intolerable monotony of that silent gliding through the unbreathable night over an uncharted sea in that dark world that belonged to another phylum of life.

By the time Buchanan and his companions had rigged up a means of judging speed and drift and finally established a course, some distant volcanic disturbance brought an ocean tremor in their direction in the form of half spent tidal waves. They came

rolling out of the opaque mists without warning, cresting against the pressure of currents, and suddenly all boats were borne along in a hopeless entanglement. The gourd filled pads along the gunwales saved Buchanan's boat from capsizing, but they passed one close by that was upended and sinking in the violent flood. When the waves finally passed them, they were totally disorganized, half the guidelines were severed, and they were far off course in a region of currents so swift that the heavy waters rippled about them with an audible sound.

As has happened several times long years before, on Teran, Buchanan now felt that his solar plexus had turned into molten lead. He took over a mica observation window and watched the churning waters in his immediate vicinity, which had suddenly acquired a phosphorescence of their own. Once, when they circled aimlessly in an eddy, he discerned a raft nearby. Sprawled out on its surface was the inert form of a woman.

"What the hell are you doing, Larry?" asked Puckett.

Buchanan made a dash for the sleeve in which they had traversed the jungle. He appropriated one cluster of oxygen gourds from the battery up front and, picking up the sleeve, started aft.

"Hand me a knife, quick!" he exclaimed.

"What the devil's up, Larry?" asked Haufek, who was still at the controls of his "gimmick."

"I'm going to cut our raft loose and tie on another. When I get on the sec-

ond raft, pull me in. There's a woman on it."

Eckert leapt to his feet. "You can't go out there!" he exclaimed. "Forget the woman. She's dead! You can't open our hood out here. We've got enough trouble!"

Buchanan eyed one of the native tribesmen and pointed to his knife, commandingly. Impressed by the magnitude of the deed that was contemplated, the *Braburni* handed over the weapon.

Eckert yelled and lunged to intercept him, but Buchanan gave him a swift uppercut and he sank to the damp deck of slats above the caulked matting of the hull. Before anyone else could move to stop him, he unfastened the back end of the hood and went out, together with the sleeve and the gourds. Puckett hastily closed the flap of the hood, coughing in the sulfuric fumes. The *Braburni* leadman released more oxygen from the gourds and the tiny whistles competed loudly with the coughing and swearing of the men.

BUCHANAN, holding his breath, swam easily in the dense water, and the currents in the eddy bore him swiftly to the raft. With him he carried the severed end of the tow line that had been attached to the lead boat's raft. As he reached his destination he threw a slip-knot around his ankle, thus tying himself to the boat. Throwing himself onto the raft, he threw the sleeve over himself and the girl and pulled one of the whistle valves clear out of a gourd.

With a "whoosh!" that died quickly in a sigh, the oxygen inside escaped and he filled his lungs with it. It was necessary for him to sacrifice another gourd in this manner before he obtained relief. In the meantime, the three remaining gourds were whistling merrily and the sleeve began to un-wrinkle as oxygen filled it. He replaced and refastened the other two whistle valves and joggled the gourds. One remained inactive, but the other began to whistle feebly as more oxygen began to be generated inside.

He groped for the girl and lifted her head in his arms. In the darkness inside the sleeve it was impossible to tell whether this was Lorena or Aarri. He forced an active gourd valve into her mouth and waited. He felt for her pulse but could detect no sign of life.

He felt a tug at his ankle as the towline became taut. They were dragging him in toward the boat.

In that moment he was aware of a great light suffusing the darkness. It was followed by a blast as a bomb exploded some distance away. The ocean rose up like a water spout and he felt himself being dragged off the raft by the towline. Without thinking of the consequences, he reached down with his knife and severed the line.

He could hear other explosions in the distance. The Patrol had detected some of the rafts and was bombing the whole area. Evidently Lorena was considered to be expendable under the circumstances, or they did not know she was here.

The raft swirled away on the crest of the new turbulences created in the

water. Buchanan knew that he was lost, with a very limited air supply. The bombings became more infrequent and more distant and finally ceased altogether. He hoped that Haufek and Puckett and the rest would make it to the Land of Ahahdd, but he doubted it.

The girl in his arms sighed, then coughed, trying to shove the gourd away. Finally, he heard her voice, murmuring incoherently. It was Aarri.

"Aarri!" he called. "Can you hear me?"

"La-ree!" she sighed. "Son of Fire!"

"Forget that baloney! Wake up! What happened to the others?"

"Two boats crash. Some fall out. I swim to raft."

Very enlightening. He cursed under his breath. It might have been better for all of them to die in the uranium mines than out here.

"You worry, La-ree? If any man take me to my brother, it will be you."

"Don't be a fool!" he almost yelled. "Lost out here on a raft without power and not enough oxygen to last us another hour? You're crazy!"

"Whiteman think what you call—logic. *Braburni* think other way—on outside, with wind and sky."

"Well, there's no damned wind or sky either, down here—so dump your crystal ball overboard and relax. This is the end of the road!"

"La-ree never believe in something impossible because he know it is going to happen?"

He started to speak, then caught

himself. Yes, he believed, in prison, that he was going to get out and find Cardwell. He believed it because he willed it. When he recalled that old fire of hate, something strengthened him, momentarily. Cardwell — out there in the star-spangled universe, preparing death for Teran.

"What is it, La-ree?"

"Nothing!"

He felt her actually snuggle against him and relax comfortably, exactly as if they were enjoying a canoe ride on some moonlit bay.

"Don't say I'm crazy, La-ree. If I was to die, why did I not do it when I fall out of boat? Why am I here now in your arms?"

"Just to prolong the agony."

"No. The gods are with us."

"Then they must breathe CO₂. They're *Gagandii*."

She tensed and sat up. "La-reel! Maybe that is it!"

"What is it?"

"The *Gagandii*! Maybe they find us!"

"And have us for supper. No thanks!"

"But they cross Sea of Darkness in boats—never get lost."

"Now you tell me! Why didn't we contact them in the first place? Make a deal with them to get across."

"They — are half enemy, half friend. Hard to find."

"Have you ever seen one?"

"Dead one—like river lizard, with air flaps."

"With what? Oh, you mean gills. Can they talk?"

"No, but there is writing language

—many signs they paint on stones on edge of upper level, for *Braburnii* read. Medicine men make messages with *Gagandi* signs." After a considerable silence she added, "Medicine men teach Aarri sign language once. Some signs tell strange stories, what you call—legends of *Gagandii*."

"Such as?"

"One is Aarri secret. Lorena always try to get. That is why she want to come with us. That is why I tell you not trust Lorena. She know I love you, La-ree, and give *Gagandi* secret to help you make star ship."

"What are you getting at? Most of that medicine man stuff is bird seed."

"Long ago, *Gagandii* say, white-men come make big secret place under mountains—try live forever. They die from demon sickness but leave great whiteman magic place. Little whitemen always try search for it but *Gagandii* kill."

Now Buchanan tensed and straightened up. She had struck a chord of memory in him that reverberated like thunder. The old legend of the Last Jesuits! In the twenty-third century, just prior to the founding of the colony on Teran, the Last Jesuits had financed a secret expedition of their own and come to Venus in the early days of its development. Legend had it that they foresaw complete dictatorship and social degeneration, that they were endowed with great scientific knowledge, even that they had discovered longevity. Their plan was supposed to be of the Messiah type. They wanted to hide out with their knowledge for several cen-

turies, develop it, and then return to human society and establish their own kind of civilization. Jealous scientific interests had influenced the government of Earth to pursue them, but they disappeared and were heard from no more.

Over two centuries later, here he was with a half-breed *Braburni* girl in his arms, irrevocably lost on a raft and about to die of suffocation—hearing fresh news concerning the legend! Logically, the *Gagandii* would know about it, if the Last Jesuits actually did penetrate their world and leave behind some tremendous technological monument to their passing.

"Aarri."

"Yes, La-ree?"

"You speak as though you know where this place is. Do you?"

"Only partly. I know which land."

"All right. Which land is it located on?"

She remained silent.

"Well?"

"Aarri not smart, but this knowledge big treasure, like heart. Not give away in one minute, La-ree."

"Hell, I was just making conversation! What difference does it make—now?"

Aarri pressed close to him. "If we live—maybe I tell, La-ree."

"Yeah. That's great!"

Thus he drifted on the raft with Aarri in his arms and waiting for the last whistle valve to sputter into deathly silence. Gradually, as the awareness of death approached, he began to savor the moments of life that were left to him with growing

desperation, not in fear of death but with a soaring evaluation of the state of living, which was a shining miracle he had never really examined before.

He was suddenly very much aware of Aarri. His arms went around her tightly, and hers responded with a perfect understanding. To him there was little to say, but she thought differently.

"La-ree, if we live—"

"Shut up!"

After a while, he knew she was crying.

"I'm sorry."

She found his bruised lips and kissed him again with a tenderness that was amazingly rare, a thing that was difficult to define—unless one believed in the fairytale of complete self-effacement and devotion.

There were worse ways of dying . . .

INSIDE the sleeve, the oxygen gourds had become silent. Neither figure on the raft moved when it bumped gently against the luminescent buoy. The current made it swing around the buoy until it caught on a line that stretched outward in the dark sea toward other glow-buoys that were invisible in the thick mists.

Nor did either human on the raft notice the approach of the strange boat along the buoy line. Great hooks emerged out of it and caught large knots in the line, pulling the vessel forward. Over the gunwales, eyes stared, like the chameleon eyes of Teranian Alphids, and behind salamander faces great gill sacks rose and fell in even cadence.

Slimy, webbed feet came over the gunwales and stepped onto the raft. Webbed hands lifted up the oxygen sleeve and chameleon eyes examined the two underneath. The creatures chirped unintelligibly among themselves and lifted the inert humans into their boat. Several others came forward with apparatus that their race had never built. They were bonafide, factory made oxygen helmets with freshly filled tanks to fit on the back. The gauges were too ancient to work, but the helmets filled immediately with oxygen at the touch of a valve. The boat stopped its painful progress along the buoyline and the *Gagandii* stood there patiently on the deck and waited for the humans to revive. Two more boatloads of them approached from the rear, and more of the slow-moving, chirping People of Darkness joined the watchers.

CHAPTER 21

THE LAND OF AHAHDD was in actuality a great continent in the southern hemisphere of Venus. By comparison with this vast, savage territory, Hahddra was England, lying off the coasts of Europe. Unfortunately, however, over sixty percent of it lay below the ubiquitous ocean of CO₂, leaving only wild mountain ranges exposed to the Venusian troposphere. This "upper level" area comprised some nine hundred thousand square miles of terrain which was largely wooded, containing high altitude fresh water lakes and turbulent rivers. Active volcanoes in

some regions laid a perpetual smoke screen along the tops of the ranges, whereas in most of the other areas where valleys, great, extinct craters or spectacular gorges and canyons would ordinarily have presented themselves to view, rain clouds drifted in and out between the shoulders of the land, making it extremely difficult for any aerial survey group from Colonial Headquarters to obtain a clear picture of the topography, except by sonarsounding and radalax bearings.

For more than three centuries, Earthmen had attempted to exploit this continent, but station after station had been wiped out completely without a trace. Punitive expeditions had always managed to scrape up a few of the tall, proud *Braburnii*, but the real hiding place of the great tribes of this land had never been ferreted out. Inasmuch as the cost of exploitation always exceeded the returns, financial pressures at home had finally caused Central Government to leave the continent alone. There was enough uranium, copper, vanadium and tungsten in other parts of Venus to satisfy the needs of Sol, especially considering the uranium shipments from Teran.

One month after the Colonial Patrol had reported the runaway expedition of prisoners from Hahddra destroyed, a tall, broad-shouldered, red-bearded Teranian with a broken nose was observed by a *Braburni* scout in the Land of Ahahdd. As the scout, himself, was almost equally as tall and powerful, and inasmuch as he was

a renowned warrior among his own people, he made the mistake of trying to add to his laurels by capturing the intruder single-handed. That he escaped with his life was perhaps intentional on the part of the red-bearded giant, and the story the scout brought to Ahahdd the Great prepared the way for him.

La-ree, the Son of Fire, had arrived at last, after some of his surviving companions had announced his death. Shortly on the heels of the first scout came others, saying that he had been observed in the company of a half-breed *Braburni* woman. Aarri, sister of Ahahdd, was coming home to her people at last.

Thus it was that Ahahdd moved forward to meet the warrior chief from the stars, who was the Slayer of Drukh. He was borne on a throne, carried by twenty warriors, leading a ceremonial regiment of painted guards wearing colorful war hides, while behind him, in the hidden land of his people, an amalgamation of tribes numbering into the hundreds of thousands prepared a holiday feast of welcome.

EARLY in the afternoon of the third day of Buchanan's and Aarri's march through the upper levels, a *Braburni* warrior stepped boldly into their path and held up his hands in the universal sign of peace. Buchanan was carrying an ominous looking weapon, which was a combination machine rifle and multiple projector of thermo- and neuro-sonics. In the instant of the native's appear-



ance, he aimed the weapon at him, but Aarri pressed his arm.

"It is our guide from Hahddra," she said.

Buchanan lowered the weapon, wondering.

"Peace, Son of Fire," the leadman

greeted him. "Ahahdd the Great comes to receive you."

The situation was fully relieved of tension when Peter Puckett came into view on the trail. He emitted a whoop of joy when he saw Buchanan, but his joy was tinged with concern as he



saw the other's unbandaged face for the first time in the silver-gray light of the Venusian day. In addition to a badly broken nose and scarred lips, a great scar beneath his right eye pulled it slightly downward in a fixed expression of stoic suffering. A stranger looking from his broken face into the depths of his brown eyes would have realized that life had scarred him on the inside, as well, and added something to his will that somehow increased the impression of his height.

"Hey Larry!" Puckett exclaimed. "Where the hell have you been? What's the idea of making me lose my appetite for a month?"

Buchanan smiled, holding out his hand to his old buddy, but he said nothing at first.

"Hi, Aarri!" Puckett greeted the girl. "Your brother is sure preparing a party for your home coming." He started to look back at Buchanan, then did a double take at Aarri. It was his first good look at her in daylight. She was not beautiful but her features were good, somehow reminding him of ancient, so-called classical art. Except for the slightly oriental aspects of her eyes and nose, she might pass for a Grecian goddess, with her full, classical lips and her heroically proportioned body.

She smiled at him, suddenly happy. "You friend of La-ree. How many others here?"

"Three boatloads got in. Or rather, three and a half. One was half wrecked. The one you got tossed out of, in fact."

Aarri's eyes widened, then narrowed. "My half-sister, Lorena? She alive?"

Puckett glanced quickly at Buchanan before answering. "Yeah. She's very much alive, I'm afraid."

"Who survived?" asked Buchanan, without expression.

"Thirty-one of us. Mostly Earth guys."

Buchanan tensed. "What about Bill?"

"Oh he's here. He'll be along with Ahahdd's parade any minute. Me and our leadman came ahead to simmer you down because we heard you were armed—" He stopped, looking at Buchanan's weapon in amazement. "Say! Where the hell *have* you been? Where did you get *that*?"

"Skip it for now," replied Buchanan. "What about the others—Herb Dobson, Ott Keffler—"

"They made it, but some didn't."

"Who!"

"Well, Phil Sutton, Hank Goodhew, Larry Pyle—"

Buchanan's lips tightened. Puckett paused for a moment. He tried to change the subject slightly.

"Some good Earth guys made it. Remember those St. John brothers?"

"Good! Who knows? Someday they might be very useful."

"What do you mean?"

Buchanan and Aarri suddenly looked up trail. Ahahdd and his retinue were coming into view.

ALTHOUGH Buchanan was aware of some of his old friends in the vanguard—Bill Haufek, Herb Dob-

son, Ott Keffler, Lee Salkin, Alex Jardine and Daniel Eckert—he refrained from greeting them because his eyes were caught by the eyes of Ahahdd the Great, staring down at him from the raised throne.

He saw a tall, broad-shouldered *Braburni* of his own age and size, a beardless warrior king who satisfied all the requisites for a powerful and successful ruler. He held his head erect, his heavy-lidded eyes were narrow and penetrating, his features inscrutable. A great, yellow war hide was draped over the back of his throne, but he, himself, was bare to the waist except for a multiple necklace of jewels and painted teeth and the heavy, gold rings in his ears. Also, by some weird form of native surgery, a large emerald had actually been set in the flesh of his forehead between his brows—the *Braburni* sign, he was to learn, of an emperor.

Evidently tribal etiquette required that Ahahdd should speak first, because the other Teranians present contented themselves with grinning at Buchanan. They stood there watching him and Aarri as they looked up at Ahahdd. The procession had come to a halt. Finally, the carriers lowered the throne to the ground and Ahahdd spoke, in *Braburni*, while Aarri translated.

"Greetings to Star Chief La-ree, Son of Fire, Slayer of Drukh," he said, in even, deep-voiced tones, but without facial expression. "Welcome to the Hidden Land. On your face are written the battle deeds of a warrior. In your eyes shines the wisdom of

many worlds. You have brought me my sister, Aarri. What is your wish?"

As long as he was being brief and to the point, Buchanan followed his cue. "My wish," he answered, also without facial expression, "is that you join your forces with mine to do battle against those who falsely rule your world and my own."

"This was my wish in the beginning," replied Ahahdd, "when I first heard you had come to this world. But what are your own forces, and what is your plan?"

Buchanan studied the young emperor chieftain carefully and chose his words well. "There are many parts to my plan," he said, "among which your part is a great one. The war you wage against the Earthmen who attempt to rule this world is only a part of the greatest war ever fought, because it reaches from star to star. The war is here. The war is on Earth and Mars. It is on Teran, my native world, which belongs to another sun than yours. There, on my world, are millions of my own kind engaged in the same kind of battle you know here, against the same false rulers. In addition, there is another race there, just as you have the *Gagandii* here, and they number into the hundreds of millions. They, too, are a part of my forces." To himself, he only hoped that The Alphid would be an ally, but he continued boldly, while Aarri solemnly translated and his Teranian friends began to stare at him in growing amazement. "But this is not all. The *Gagandii* are also on our side with their magic bomb that they used

for you against your enemies in times past, and with a great secret which only now makes possible the Great Plan which will bring victory to all of us."

"Hey, wait a minute!" exclaimed Keffler, unable to contain himself. "Not so fast, Larry! What is this—"

"*Cirya!*" shouted Ahahdd, glaring at the offender.

"Silence!" translated Aarri, and Keffler shut his mouth.

"The *Gagandii*," said Ahahdd, "are mystery people of the Darkness. They know many great things but hard to make friends. If they with you, too, then you speak truth. Victory will be ours. But speak. What is your story and what is your plan?"

Buchanan told his story. The *Gagandii* had considered them as prisoners at first. When they learned that Aarri could understand their written language, however, they were taken to the Land of Ahahdd, under the CO₂ belt, to be questioned by higher authorities. They were sealed in a small room that was filled with oxygen for them. At floor level there were flap covered slots, through which the slate tablets and painting materials were passed to them.

What the *Gagandii* wanted to know, first of all, was what all the excitement was about. They had been aware of the movement of Ahahdd's small fleet of boats and later the passage of the prisoners. When the bombing occurred, they were determined to capture someone from the boats and question them. In anticipation of meeting upper level inhabitants, or

oxygen breathers, they had brought along special breathing equipment which turned out to be one of the main points of discussion.

The *Gagandii* actually knew where the lost laboratories of the Last Jesuits were located. They often visited the place and used some of the apparatus they found there, although for the most part it was incomprehensible to them.

At this point, Haufek and some of the others began to show at the seams, but Ahahdd warned them to silence with an imperious gesture, insisting that Buchanan continue without interruption.

Although the *Gagandii* had not been troubled as greatly by the colonization of Venus by Earthmen as the *Braburnii* had been, they were worried, nevertheless, about the possibilities of the future. Moreover, their main interest, strangely, was in the existence of other worlds beyond the sky. When Buchanan gave their chieftains a crude description of suns and planets and solar systems and delineated the possibilities of various types of worlds and environments in the galaxy, they became actually excited. They wanted to know how the whitemen traveled to such worlds. Buchanan tried to tell them that there were difficulties, but that Haufek's new type of ship might open up whole new horizons among the stars. He emphasized that if they could procure cosmium for Haufek and allow him to make use of the lost Jesuit laboratories it might not only be possible to discover new worlds,

but to smash the dictatorship of the Earthmen.

"They then asked me concerning the nature of my plans against the false rulers of the universe," Buchanan continued, "and when I told them they said that they would give me and you, Ahahdd; every assistance possible, on two conditions."

Ahahdd's narrowed eyes did not even blink, nor did his face move a muscle. Finally, he spoke. "The conditions?" he asked.

"One condition is that you meet with them at the borderland of mist and sky to have a great council of war and come to warriors' agreement. We must all meet there and decide on all our plans. The *Gagandii* desire that you, Ahahdd, bring to that meeting all the lesser chieftains over whom you rule and any others with whom you may be allied. They give three parts of one year for you to communicate with far lands and bring all the *Braburni* forces in your world together, because they are going to do the same."

Ahahdd still did not blink an eye. "What is other condition?" he asked.

Buchanan looked at his Teranian companions and took a big breath. "That is one which concerns my own forces. We must agree to give them something if they furnish us with the Power Metal called cosmium and lead us to the Jesuit laboratories. It does not concern the *Braburnii* because it lies beyond this world."

"What," said Ahahdd, "is your plan, Son of Fire?"

"My forces must work in the lab-

oratories on whiteman magic and prepare new weapons as well as the great ship. It will mean years of work and it will require the help of many thousands of your people. But the years are numbered. Within six Earth years a great force of ships from the Sol System will reach my own world and seek to destroy it. By that time, this new ship we wish to build must be ready. In the meantime, we must furnish you with certain weapons and you and the *Gagandii* will have to war against the Colonial Headquarters here. It will be a bloody war, Ahahdd, and perhaps a long one, but with our weapons you may be able to drive them out. Also, such a war is necessary to keep the Earthmen too occupied to discover what we are really preparing. An outbreak of full scale war on Venus might even recall the fleet of vengeance that would be sent against my own world, which must survive if yours is to be eternally free."

"Holy smoke!" ejaculated Puckett. "You're talking about a Second Front!"

The others remained silent, watching Ahahdd's implacable features. Aarri took hold of Buchanan's hand and squeezed it, tensely watching her brother. He sat there on his throne and studied them both.

At last he spoke. "Son of Fire speak heavy words. What other proof have *Gagandii* they know place of *Jeshutii*?" He used the *Braburnii* word for Jesuits.

For answer, Buchanan held forth his strange weapon. "Haufek great

whiteman wizard," he answered. "Ask him if this gun made by any whiteman magic we have today? They gave it to me as a sign of their good will, as proof that they spoke the truth."

Ahahdd motioned to one of his guards and the man brought the gun to him. He looked it over slowly and then handed it to Haufek without a word.

Haufek took the gun and examined it carefully. Finally he looked up and said to Ahahdd, "It is an old weapon, made long years ago, but by a great magic. It is good. I think the Last Jesuits made it."

Ahahdd gazed at him expressionlessly. "What it do?" he asked.

Buchanan said, "It's both thermo- and neuro-sonic, Bill. Try the thermo on some underbrush."

Haufek skillfully located the correct controls and aimed at a small tree. He depressed a stud and the tree went up in smoke. "It can do more," he told Ahahdd. Whereupon he aimed at another tree and activated the machine rifle part of the weapon. The warriors present staggered back in surprise, but Ahahdd revealed no emotion of any kind.

"It will cause death to all present," said Haufek, "if I press this." He indicated the neuro-sonic activator.

Ahahdd finally spoke again. "The *Gagandii* not make this. It is great magic. I now believe they speak truth. But Son of Fire bring great question to *Braburnii*. We must return to house of Ahahdd and talk to elders. Come!"

Whereupon the warriors lifted the throne to their shoulders and the procession began to retrace its steps. Buchanan was surrounded by his friends instantly.

"Ye gods, Larry!" exclaimed Dobson. "Do you realize what this may lead up to?"

Buchanan looked at him and said, "Do you?"

Haufek pounced upon him. "Larry, don't tell me those labs of the Jesuits actually exist! What's the real story?"

"I'm not kidding you," he said, because the *Gagandii* are not playing games. They mean business all right. Those labs exist and they can take us to them."

Haufek's pale blue eyes shone with a new light. "Let's see," he said. "With the whole native side of the planet giving Teran a Second Front, with hundreds of thousands of *Braburnii* and *Gagandii* available to get a lot of raw materials we need, with a reasonable supply of cosmium and a half useable lab with real thermatron power banks or maybe a reactor, and at least five years of time—" He turned to Buchanan and slapped him on the back. "Hey! We've got a chance! I didn't tell you before, but another addition to our ship may be certain weapons the Sol System never heard of. I've even experimented on some of those and they're potent!"

"Yeah, but we're still dealing in long shots," complained Eckert. "We'll have to work with our guts!"

"He's right," said Buchanan.

"Larry, what was it you had to

promise the *Gagandii*?" queried Dobson.

"Oh—that."

"Yeah, what is it?" asked Puckett.

Buchanan said, "Ha!" and walked on. Later he remarked, "After we build a ship that works, ask me that question again. It's silly to think about it now."

CHAPTER 22

ONE NIGHT long after his arrival in the hidden land, Buchanan lay on his sleeping furs staring at the dimly lighted ceiling of his quarters. Ahahdd had given him the Council Chamber of the Elders out of respect for his recognized status as the greatest chief among them. He wondered if he was a chief or a fake. His whole universe was a daisy chain of "ifs," even though the Great Plan was definitely taking shape. Important chieftains from other continents were arriving every week now, guided through the seas of darkness by the *Gagandii*, themselves, along their networks of lines supported by glow-buoys. The day of the great meeting between the upper and the lower levels was close at hand.

But there were more problems than plans. One, in particular, he was worried about. The *Gagandii* had mentioned an obstacle to reaching the Jesuit layout. It was far down in the depths of their own world, below sea level. The pressures were great and the sulfur content of the atmosphere was high. Ordinary oxygen helmets were not usable because they had no

cooling units, and the journey was long and even dangerous. The problem was how to get there, but they had left that up to the whiteman's magic. What was indicated was a space suit of the type used on the work rafts or on airless moons and planets near the sun. They were like deep sea diving suits and were equipped with self-contained cooling systems, as well as food, water and air supplies. In fact, he needed a couple dozen suits like that. It was a nice problem. It had been discussed among Teranians and Earthmen alike, without any tangible solution being reached.

Vague plans drifted through his mind concerning the possibilities of leading a small raiding party to Hahddra and lying in wait for a Patrol ship. With a vessel like that in their hands, they might be able to go further and—

Just then, the light went out. A single oil lamp had been burning in a niche near the entrance to the cavern. There was no wind. But the lamp had gone out. Tensing slightly, he raised himself on his elbows, listening.

As he became aware of the faint sound of naked feet approaching him, he reached for the Jesuit weapon which lay on the floor beside him. But before he could get a good grip on it, he felt the soft form of a woman lie down beside him, and her arms went around his neck. Her lips were against his before he could speak. They were not the lips of Aarri, which he well knew by now. Instead of tenderness there was feverish desire. Instead of

adding to him they took away.

Against an assassin he would have used violence. Against this more subtle danger there were other defenses, if one really cared to use them.

He waited for her to end the kiss, but it lingered, and her body pressed tightly against his, burning him. And then he was seeing the endless years behind him with his body instead of his mind. Loneliness and a man's hunger . . . His arms wrapped around a slender back. She was wearing one of the spiraling mid-riff sarong type of costumes worn by the *Braburnii* women, and beneath it he felt a female body of fire.

His mind brought him the words of Didjandu, the *Braburnii* chieftain he had left behind on Hahddra: "Witch Woman have demon fire in her body. This magic twist the eye of man and he see not what trail he follow."

And he heard Aarri saying, "Don't trust her, La-ree. She is evil!"

The lips pressed against his had found the pent up spring of his longing. The parched meadows of the lost world inside him were bending already to the winds of a promised cloudburst, and he wanted those wastelands drenched. He thirsted in his roots and clutched at her, with a thunder in his ears, and his veins were a web of lightning.

But through it all he saw the narrowed eyes of Ahahdd and heard him say, "Son of Fire, welcome . . . On your face . . . the battle deeds of a warrior. In your eyes shines the wisdom of worlds . . . Son of Fire speak heavy words."

Hundreds of thousands of tribesmen motivated in the lower and upper levels by the plans of the Star Chief—Lydecker and his underground, trillions of miles away—and Cardwell!

To himself he said, "Hell!"

He tore himself loose and said aloud, "Lorena, what do you want?"

"I want you—only you, Larry. You are the only man who ever—"

"Shut up! You want something else!" He shook her.

She relaxed and he shivered as the fire of her cooled. He shivered with the struggle to overcome the desperation of his body, and he fell back upon an old, old friend, which gave him strength at last. It was hate. Hate for Cardwell. Hate for treachery and the ugliness of deception. Hate for the mistrust of her, doubly so because she was a flaming, beautiful, desirable woman. Hate because she could not give the real tenderness and devotion that came from Aarri, who loved him deeply. Aarri, who was not beautiful but who was real. Lorena was not real. She was a witch, or any way you cared to spell it.

Her arms were still around his neck and she kissed him on his ear. He could feel the warmth of her breath as she whispered to him, "I should get mad, Larry, because you just dumped ice on our first fire. I should yell and scream. But I won't. I want to prove I love you. I can help you."

"Okay, so you're a big help. Now get the hell out of here!"

"Larry, you need equipment to get to the Jesuit labs. Maybe I can get it for you."

Buchanan's mind came swiftly back into the saddle. "How?" he asked. After all, she was an important personality in the enemy camp.

"The *Gagandii* have buoy lines to Hahddra," she said. "If you or Ahahdd could arrange it, I could go back and—"

"Oh yeah? You could go back and send over a fleet of Patrol ships. Now do you want to walk out of here or get thrown out?"

Quietly, she got to her feet. "I'm not mad, Larry. Someday I'll prove I love you." Whereupon she left him.

"Well I'll be kicked to death by little Alphids!" he exclaimed, after she had gone. And again he stared at the ceiling, even though it was dark and he couldn't see it.

His long, powerful body was bathed in sweat. The storm cloud had passed and withheld its rain. He thought of Anne, but the memory of her was attenuated by great gulfs of space and time. He finally fell asleep to dream of Aarri—a tender dew for the parched meadows . . .

THE great conference between the upper and lower level tribes lasted a week. They met in the borderlands of mist and sky, and a crew of *Braburni* messengers working in oxygen sleeves went back and forth over the border with armloads of painted slates, historical slates that now belonged to the great webs of destiny that were being spun around Man's known universe. Unknown to the officials of Central Government, over five million Venusians were planning

an effective Second Front in the Teranian War. Three facts looming out of that conference would have changed the entire complexion of the Sol System's strategy of war. Just three items: The laboratories of the Last Jesuits; cosmium; and William Haufek, one of human civilization's greatest nuclear physicists.

But they thought he was dead, and the Jesuit story was a lost legend, and Venus was too big and hot for cosmium exploitation. And in the meantime a huge new Interstellar Fleet was forming, equipped with weapons that were supposed to blast even The Alphid out of existence.

Unanimous alliance was the greatest product of the conferences, but the greatest immediate problem was the means of getting to the hidden Jesuit facilities. To save face as a great wizard, Haufek had had to promise that he would rig up something, and as a matter of fact he had some ideas on the subject but the task was close to insurmountable considering the primitive materials at hand. Haufek needed equipment from Earthman civilization.

In the silver-gray twilight of the evenings, Buchanan had become accustomed to walk alone or with Aarri along the barren ridges above the hidden crater where the tribes of Ahahdd lived. Up there was a slight wind and a coolness of dispell the humidity from the air, and the fog from his mind.

One evening he was with Aarri. They walked, hand in hand, along the high flung ridges, aware of the purpling

coloration in the dimming bowl of the impenetrable sky. To their left they saw the perennial clouds that were trapped in the crater. To their right the long, rugged lines of the jungle clothed mountains and the red-earthed heathen foothills fell away a mile below into the endless mist of Gagandiland. They were mists without horizons, melting and blending into the sky, making a giant boat of the mountains that sailed into nowhere. Almost a hundred kilometers away they could see another ship—the soaring volcanic cone of Hahddra sailing slowly into the night.

They were alone, but Buchanan was aware of the ponderous weight of the universe—Man's universe, with which he was dabbling. Was the dream of freedom degenerate self-indulgence in the face of overwhelming odds, when millions and millions had to die for it? Certainly his personal share in that dream was self-indulgent—his hate for Cardwell and all he stood for. Behind it all was a deep-seated complex tied up with him and Cardwell and Anne. Long ago there had once lived a philosophical psychologist named Freud. Freud's philosophy said that Buchanan's glands were compromising the universe.

Well, to hell with it! His vengeance hunger was a great, dark, gurgling, gushing thunderflood of glory. Let history take care of itself.

But the music of the spheres was jangling discordantly as titanic effect responded to the new foundations of cause that he was building.

"La-ree."

The strained Nirvanah of a bitter cosmic perspective broke like a bubble, and there was Aarri walking beside him on a mountaintop.

"Yes?"

"You never told me—about her."

"About whom?"

"The woman you love—far away."

"How did you know there was a woman like that?"

"She stands between La-ree and Aarri. It is plain."

"Aarri, I really think you love me."

Her hand squeezed his. "La-ree! La-ree! You know it! You *are* my love!"

He looked at her and smiled, placing his arm around her waist. "Yes," he said, "I know it." He knew she wanted to stop walking and come into his arms, to be loved, but she was restraining herself, holding back because she was not the woman he wanted. He smiled inwardly, to himself, sadly. He looked down the long channel of twenty years and there was Aarri, a Venusian half-breed, with a pleasant face, a beautiful body and a shining devotion. Fate was a kaleidoscope.

"Maybe," he said, "the laws of man should be limited to the atmosphere of the worlds he lives in. Maybe the great spaces between worlds should be a divider between one set of things and another."

"What you mean, La-ree?"

"I mean—while I am here—this is my life. When I go, that life will be left behind. There'll be heartbreak then, but if we're both willing to pay the price—"

She stopped and stared up at him, wide eyed. "You mean—" He was not sure she was breathing.

He looked kindly into her eyes and smiled, then slowly nodded his head, taking her into his arms. Her head was suddenly against his chest, but she was not quite responding yet, wanting to make sure she had understood him correctly.

"I need love, Aarri. God knows I need it. And you do, too."

He felt a hot teardrop on his arm. He looked down at it, wondering.

Suddenly, they heard someone running toward them. They disengaged themselves and saw Peter Puckett. He began to shout.

"Hey Larry! Lorena took a powder, and guess who with?"

Buchanan tensed and he felt Aarri do so also, for his hands were still on her arms. She looked up at him, drying her eyes, the transition of emotion from tenderness to hate and alarm straining her face.

"What happened?" he said, when Puckett came up to them, puffing hard.

"Well, you know she's been playing around with Dan Eckert."

Come to think of it, he had seen Eckert talking to her on several occasions, but he hadn't given it much thought.

"Eckert must have fallen for her, the b— Sorry, Aarri." Puckett took another breath and went on. "The two of them have just disappeared. We think she's talked him into going back to Hahddra."

Buchanan's eyes narrowed, then

widened. "My God, if she touches off an alarm at this stage of the game, all our plans—" He gripped Aarri's hand. "Come on! Let's contact the *Gagandii* and try to intercept them!"

The three of them ran back toward the camp of Ahahdd the Great.

ONE day later the news came to them out of the mistlands that *Gagandii* patrol boats had been unable to intercept the fleeing pair, but a boat had definitely been stolen. There was a possibility of their actually reaching Hahddra. A council of war had to be called, over which Ahahdd and Buchanan presided.

Buchanan pointed out the dangers of the situation. "If Lorena reveals to the Colonial Government what we are doing and they get wind of our possibility of acquiring cosmium and the use of the lost Jesuit facilities, and if they know we are alive here working with you Venusians and that Haufek is with us, they will stop at nothing to destroy us, even if first line battleships have to be called from Earth. They'll blow this hidden land into mist. If that is Lorena's plan, then the attack can come anytime. This place has to be evacuated. We've got to find some other place to hide, until we can find a way of getting to the Jesuit labs."

"They will not destroy," said Ahahdd. "They will come to find out what they can—about *Jeshutii* hidden place and magic metal of death you call cosmium. We fool them, like in past times. Number of warriors stay and be captured but tell lies to take

up time while we go hide in new places. They not know we so many. Think if they capture few they capture all. Captured warriors can tell they get mad at Earthmen and Teranian friends because of big trouble they cause and that they killed them. Maybe they believe and go away."

"Not if Lorena has anything to say about it," said Buchanan.

"We can try it," put in Haufek.

"Yeah," said Puckett, "but who's going to volunteer to be captured?"

CHAPTER 23

THERE were *Braburnii* volunteers, but before the camp could be evacuated, all their theories were suddenly dissolved in a totally unexpected development. Lorena and Daniel Eckert returned alone, in a stolen Patrol ship. On board was a single, heavy duty type space suit that Lorena had managed to have brought from Headquarters under the ruse that she was on the trail of something important that military interference would obliterate. Eckert had successfully posed as a turn-coat stooge who was trying to earn his freedom by framing his pals.

"That one suit," said Haufek to Buchanan, "opens the door to the Jesuit lab. We can fly this ship to the lowest possible point, meet our *Gagandi* guides, and one of us can go on down and look the place over. There may be equipment there that can be converted for use and brought back, and then several can go down."

"Sort of like the cannibals and the

missionaries," put in Puckett. "Hey Eckert, I guess we'll have to use some heavy hawsers to haul back all we said about you."

"Yes, Dan," said Buchanan, "but why didn't you let us in on it?"

Eckert almost sneered. "You wouldn't have trusted Lorena. Without her I couldn't have swung it. I figured I could handle her if you couldn't."

Buchanan raised his brows and looked from him to Lorena, who was smiling at him cozily with tongue very much in her cheek.

He said, "Ha!"

"But I got hold of some news, through the Patrol Guards—or rather Lorena did," Eckert added. "The Interstellar Fleet is just about ready to go. They've speeded up operations because The Alpid is on a rampage."

Buchanan squinted at him. "The Alpid?"

"Yeah. He's actually sent Earth an ultimatum! I don't know what the message said, but the effect of it is that Sol should keep its nose out of the Alpha System or take the consequences, whatever they are. Of course Earth propaganda is pooh poohing the whole thing and they're advertising how tremendous the Interstellar Fleet is. Now they're out to smear Teran, though. They must be really scared because they're out to blast it out of existence."

"That's a hard one to believe," said Buchanan. "Forral, Pomeroy and Cardwell are realists. They're probably emphasizing the danger in order to get full support for the fleet build-

ing and make the war popular—a noble necessity, for survival. *Et cetera.*”

“Speaking of realism,” said Hau-fek, “let’s evacuate this camp anyway. If Lorena doesn’t go back soon to Hahddra or Headquarters they’ll come looking for her. They might even be on her trail anyway, in spite of her warnings to stay out.”

“You’re right. We’ll move this suit over to your little shop and you can check it over.”

“Larry.” Lorena had stepped close to his side.

“Yes?”

“Have I proved something?” she asked. “I didn’t have to come back here, you know.”

He hesitated, watching the crew of Teranians and Earthmen go to work getting the space suit out of the ship. It was weightless in space, but here it weighed a quarter of a ton. Only a Teranian could hope to maneuver it on the surface of a planet.

“You owe me a minute of your time,” she said.

“All right,” he answered. “I guess I had you wrong.”

He took a walk with her.

LATE that night he was awakened by a *Braburni* guard. The warrior motioned for him to get up and follow him quickly.

The man led him down into the mat-covered trenches that formed the labyrinthine world in which the *Braburni* hid, beneath the floor of the crater. He pushed his way through a small crowd of natives who were

standing around a lighted doorway. They opened a path when they saw Buchanan, but they said nothing.

When Buchanan stepped into the room he stopped breathing for a moment, while his blood thumped into his head. Aarri stood there looking at him dazedly, with a bloody knife in her hand. On the sleeping furs at her feet Lorena lay in a dark pool of blood which was coming from her left breast.

Without a word, Buchanan knelt by her side and lifted up her eyelids. He bent down and placed an ear to her breast and heard nothing. She was dead. He remained at her side, kneeling, and looking at her perfect face. Finally, slowly, he looked up at Aarri. He got to his feet.

He stood there looking at her, and finally his lip curled. He slapped her across the face. “Jungle law!” he exclaimed. “Savage! Half-breed! And I thought you were the tender kind! You’re as hard as she was!”

Aarri stood there looking back at him, on her face a red welt from his back handed slap. Tears began to flood her eyes. She ducked her head and ran away.

Something twisted, hard and sharp, inside of him, as he saw her go like that. But—good God! This was cold-blooded murder! For savage jealousy. All he had done was take a walk with Lorena.

Before he could do or think much about Lorena’s death, Hau-fek looked him up. His face was deathly pale.

“Follow me,” he said. “You’ve got to see something before I destroy it.”

Buchanan followed silently. This was one of those nights, he told himself. Anything could happen. He kept thinking about how he had slapped Aarri. And of Lorena's beautiful body, lying there on the floor in its own blood. She had meant well, after all, and been paid by getting stabbed. Maybe she really had loved him.

Haufek led him to the Patrol ship. Inside, he took him to the small bridge and reached under the instrument panel. He fumbled with a bolt, disconnected something, and then took it out. In his hand was a tiny micro-transmitter.

"I tested it," said Haufek, "and it was transmitting a steady howl, on a beam aimed straight at Hahddra."

Buchanan's face reddened, then paled, and the muscles along his jaw rippled his short red beard. "Think the Patrol put it there without Lorena knowing it?"

"Hell, I don't care who put it there. The point is, the Patrol knows where we are. We'd better scatter!"

"Let me have that." Buchanan looked carefully and found a flat, smooth, plastic surface. On it he saw Haufek's fingerprints. Mixed in with them he saw the smaller, slender fingerprints of a woman. Lorena!

He had to make sure. "You take care of the details," he said. "I'll be back soon. Question Eckert."

"I doubt if he knew about this."

"So do I—the dumb stooge!"

He went back to Lorena's room and again pushed through the crowds. Lugalubrious as it was, he forced himself to take her dead hand and press her

index finger against the transmitter's base, alongside the other small fingerprint. In the light of the oil lamp he examined the two and found them perfectly identical. Lorena had installed the tell-tale transmitter, herself. Now there was no doubt.

He took a walk. So she was a witch all along! Aarri had never trusted her. Aarri knew that Lorena could twist a man's eye and make him miss the trail. She knew that her half-sister was a stinking, foul, self-seeking traitor! She knew she was up to no good and felt that killing her was the only way of avoiding catastrophe for all of them. All right! So she was jealous, too! But that wasn't the main reason she killed Lorena. She was smarter than all of them put together.

Suddenly, he came to a dead stop. Wait a minute! She put that transmitter in the ship merely as a locator. But the enemy didn't necessarily want the location of the camp. They wanted the location of the country where the secret Jesuit outfit was. They were waiting for the supposedly stolen Patrol ship to be taken there, and then they had planned to close in.

But now that the transmitter had been disconnected the Patrol would know its trick had been discovered and that Lorena was probably a prisoner, though they could not know, of course, that she had just been killed. Attack was a foregone conclusion.

Buchanan began to run. As he did so, he heard others running also, and he heard shouts of warning. From the sky searchlights were stabbing downward. As he looked upward at the

source of the lights he saw three first class Patrol cruisers descending through the cloudbanks. They were descending leisurely, as though they had nothing to fear.

He ran into Daniel Eckert and grabbed him. "So you're the boy who could handle Lorena!" he yelled at him. "Well this is what you've brought along with her, you dumb stooge! Maybe next time you'll follow orders!"

Eckert showed resentment in his eyes only. He was too occupied with the emergency to take the matter up on a personal basis. "We gotta get out of here," he said. "Where is Lorena?"

"She's dead, so run for yourself."

"Dead!"

"Yeah. A transmitter was found in the ship. Fingerprints showed she planted it. Do you think the natives would go for such treachery? They let her have it." For some reason he had begun automatically to defend Aarri. Suddenly, he knew why he had begun to run in the first place. He wanted to find her and make sure that she would be safe. And he did owe her an apology.

He left Eckert and ran on. Assuming that she had followed practiced emergency procedures along with the rest, he headed for the nearest secret exit, which happened to be at the back of his own quarters. There were Puckett, Haufek, Keffler and several Earthmen lugging the big space suit through the opening into the natural passages that honeycombed the crater as a result of previous volcanic

activity. He helped them with it and they swung the camouflaged door of rock back into place on its pivots.

"We're the last ones through here," said Haufek, "so we'd better seal the exit." As he said this, he pulled on a long lever made out of a log and a trap above the rock door fell open disgorging tons of sand and boulders. Even if the enemy found the camouflaged door of rock, they would not be able to open it now.

Buchanan knew there were more than a dozen such exits in the crater, all of which led downward through the old flues and fissures into larger chambers far below, and that from these tunnels led outward into the humid jungles of the foothills and the borderland mists. Somewhere down there he would find Aarri.

But as the night wore on and he came upon thousands of the *Braburnii* in the torchlit caverns below, he found no trace of Aarri. Finally, however, he located Ahahdd.

"Ahahdd, have you seen your sister?" There was no interpreter present, and at first Ahahdd did not understand him. "Aarri!" Buchanan exclaimed, desperately.

Ahahdd's face still refused to reveal any expression, but his eyebrows raised slightly. His dark eyes were particularly penetrating, and he seemed in a tragic mood. He turned from Buchanan only long enough to call an interpreter to him, an eager, slender *Braburni* youth who was visibly honored to serve two such lofty chiefs at the same time.

"Tell him," Ahahdd said to the

youth, "that he does not know the way of the *Braburnii*. To promise the heart is to be born again. To be rejected is the end of new life."

The youth's mouth dropped agape. "But—sire! Is it that your sister and the Son of Fire—"

Ahahdd only nodded affirmatively. Then he added, "You know our set plan in times of attack. Volunteers remain behind us to be taken prisoner in order to confuse the enemy with misleading stories. Aarri remained as a volunteer."

The young interpreter stared, speechless.

"Tell him that," said Ahahdd, and then he walked slowly away, as though he had more important duties to attend to.

But from the shadows of the great cavern they were in he watched the tall, red-bearded Teranian's battle-scarred face as the *Braburni* interpreter delivered the message. Buchanan's face remained expressionless, but the slow lifting of his head, the tensing of the muscles in his neck and the clenching of his big fists did not go unnoticed. Ahahdd's narrow eyes narrowed more and a bitter smile of satisfaction tugged at the corners of his large lips. Then he really walked away . . .

BUCHANAN walked alone up the mountain. The lower jungles were humid and the insects were murderous. No one could sleep. But he walked up the trail toward the crater in order to be alone and think. If the Patrol cruisers had gone, he wanted

to see the crater floor and make sure that they had not merely killed the volunteers and gone away. This was a distinct possibility because Lorena's body had been left lying where he had last seen it. They had no doubt found her, and now there would be hell to pay.

Lorena had probably told Headquarters about everything—the *Gagandii's* ability to handle cosmium, the Jesuit labs, the existence of Haufek, the huge alliance of upper and lower level Venusians—and that he, Larry Buchanan, was now heading the Second Front effort. If Cardwell got wind of that, he might really divert the new Interstellar Fleet and give Venus such a working over that the planet would go up in volcanic smoke. Damn it! If they only had Haufek's inversion drive ship ready! Or if they could only reach the Jesuit labs and fabricate a few of Haufek's special weapons they could at least get Plan A ready and surprise Colonial Headquarters. Once that place was taken over and Haufek was given a little time, defenses could be set up, powered by cosmium, which might even surprise the Interstellar Fleet. Soon Haufek intended to make a try for the hidden Jesuit layout in the stolen space suit, but soon was not soon enough.

In the dark early hours of the morning he reached the floor of the crater and found everyone and everything gone—including the Patrol ship that Lorena and Eckert had brought from Hahddra. Above all—Aarri was gone.

He walked up on the ridges and stayed there until the shrouded skies began to grow silvery gray with the dawn light. He found a flat rock and sprawled out on it, waiting for the sudden increase in the degree of light that would mean the sun had risen. But he fell asleep, out of sheer exhaustion.

He awoke two hours later. He opened his eyes abruptly and got to his feet, staring down at the foothills where his companions had spent the night. Having fallen asleep with a specific problem on his mind, he was surprised to wake up with the solution to that problem clearly delineated.

Why hadn't any of them thought of it before!

Gagandii slate writings were ambiguous at best, and during the conferences this one question had not been asked because it had not entered anyone's mind. Moreover, the *Gagandii* who had visited the Jesuit labs might not have been thorough in their observations or been able to recognize everything they saw. Or they might be the exasperatingly logical kind who felt it was impractical to waste words describing something which could not be used until those who knew how to use it arrived at the place where it was located.

He turned and trotted toward the trail that led down the mountainside.

"IF what you say is true," said Ahahdd, after Buchanan had outlined his plan to him and Haufek and Puckett and various visiting

chieftains, "then our first plan of attack would have great chance to succeed. We will make arrangements at once."

"Now how in the devil did we ever miss thinking of something so obvious?" asked Haufek, scratching his head.

"I could still be wrong," warned Buchanan.

"But man—if you're right!" ejaculated Puckett, enthusiastically.

"Still, you know I was supposed to try first to make it to those labs," complained Haufek.

"No offense, chum," said Buchanan, "but that suit's going to be heavy. It'll be just about all I can do to move the legs of it."

"You just explained why I should be the one to go," said Puckett. "Remember all the times I smeared you in wrestling matches?"

"That was out in lovely space, Pete, and we weren't wrestling in all metal space suits."

Puckett produced a sly smirk. "Your main reason for being the hero wouldn't be that torch you're carrying for Aarri now, would it?"

Buchanan answered almost too quickly. "Any objections?"

Puckett and Haufek raised eyebrows at each other. An interpreter whispered in Ahahdd's ear and the latter's enigmatical eyes narrowed again more than usual.

"You travel once more dark trails of warrior," he said to Buchanan. "May the gods go with you."

"I don't think they'd enjoy the scenery," retorted Buchanan, and he

grinned at his Teranian companions.

CHAPTER 24

THE SCENERY to which he had referred was not even enjoyable to the *Gagandii* who were his guides. *Braburni* oxygen equipment had taken him to the hidden continent from which real operations were to begin. Jesuit oxygen equipment was usable from there on, while *Gagandii* squads carried his metal space suit on a litter behind him. But when they entered the volcanic flues and penetrated cavernous worlds below the level of the Seas of Darkness and the temperature rose, he finally had to get into the big suit and turn on its cooling system. Also, he needed the liquid food and stimulants it contained.

Two days to get that far, and the suit held a thirty-six hour air supply. He could not waste that time on sleep. He had to push forward on the stimulants. He had a feeling that the sloth-slow *Gagandii* were amazed by his strength and endurance, because they were continually meeting prepared relays of their own kind to spell them off and lead the already legendary Son of Fire deeper into the Never Never Lands of their own dark world.

Now he, too, was a sloth, or a metal salamander, weighing more than a quarter of a ton, an animated diving bell with tools for hands and a searchlight for an eye. It was all he could do to lift one ponderous leg up and plant a heavy foot ahead of the other.

Many times he would slip on the steep inclines and go clanking and rolling to the bottom of a passageway, and they would have to come and pick him up. That was one reason why each relay squad numbered no less than a dozen of the weird, gilled, chameleon eyed *Gagandii*.

But thank God for that spacesuit! In the piercing shaft of his searchlight, the white CO₂ mists took on a yellowish hue, revealing the increase of the sulfur gases as the temperature and the pressure rose. Outside temperature: 140 degrees Fahrenheit. Outside pressure: twenty pounds per square inch. The *Gagandii* relay squad that now relieved him was wearing breathing equipment of its own concoction—to give them CO₂ and some oxygen. A greenish slime covered their bodies. Either they had smeared it on as a protection against the heat, or it was the *Gagandii* equivalent of sweat.

Question: How in bubbling hell had the Last Jesuits ever found this place? The answer, emerging subtly out of a logical pattern of his subconsciousness, supported his theory concerning what he hoped to find when he got to his destination.

Thirty hours later, he was staring out through the polarizite into the mustard yellowness, feeling the heat as the cooling system failed to counteract fully an outside temperature of 170 degrees, and he knew he was blind with fatigue. He tried to lift a leg, then fell over with a "clunk!" Everything went black.

HE had blacked out from fatigue, and he slept. He still had air. But he awoke, finally, gagging on the stale dregs of it. He was suffocating.

He looked up through the polarizite viewpanel of his helmet to meet the large eyes of a *Gagandi*, who was down on his hands and knees, working to open the head panel. The latter was wearing his own breathing apparatus.

Something was distinctly new and different. He saw the ceiling of a cavern, but in that ceiling he saw the persistent marks of machinery. There was light, all over the place, and no murky yellow of sulfur gas or milky white of CO₂. A glance to his right revealed a ponderous metal door containing inset gages, and valves—the door of a large airlock!

He had arrived! They had carried him the rest of the way!

Hastily, he looked at the outside pressure and temperature, on his helmet gages. Fifteen pounds pressure; ninety degrees of temperature; normal humidity. And the lighted glow-gas chamber signalled an oxygen atmosphere!

He pushed the webbed hands of the *Gagandi* away and unfastened the panel for himself. When a musty smelling but breathable current of air flooded in on him he almost fainted again.

"Thanks!" he said, and he smiled up at the weird face above him.

Other *Gagandi* slothd into view. They helped him out of his suit. Their breathing apparatus consisted of chemical chambers hollowed out of stone, ostensibly quite heavy to carry.



Tubes looking like the intestines of some animal led upward, off their backs into damp, spongy sacks covering their gills, and exhausted CO₂ swirled around their necks and faces like smoke. They looked like creatures out of some other world's hell. They all stared at him, waiting in silence. It was up to him now. This was a territory that he was supposed to know more about than they. Whiteman's magic.

He was fascinated by them for a moment as he realized the magnitude of their own effort in bringing him here. They believed he would actually fulfill his desperate promise to them.

"That all depends," he said aloud, "on what this place—and the future—has to offer."

It was then that he saw the dead *Gagandi* lying on the floor over against one wall of the corridor he was in. Just as he stepped over to examine him, he caught a motion out

of the corner of his eye and turned. Another of the creatures fell down and lay there, dying. He looked at the rest of them, wide-eyed with astonishment.

They were all dying, at the end of their breathing supply. Futilely, he made a start toward the airlock door, not knowing quite what he was looking for, but the *Gagandi* leadman who had helped, or tried to help, open his faceplate, waved him off, even as he sank to the floor. Within another minute, all of them lay there, gasping their last.

Buchanan stood there helplessly, looking down at them, and as they died he caught a message from their eyes: *Remember your promise!*

In spite of the importance of the place they had led him to, he stood there thinking of them. Any race whose individual members would sacrifice their lives for the good of the whole was civilized. They deserved a break. But could he really give them what they wanted? It was an opiate dream, but he was going to try, if it were possible.

Suddenly he came to the realization that he was terribly alone, carried to a tomb of ancient scientists under the continent of another world. He was Aladdin in the magician's cave—or he was a blood brother to the horrified victim of Montresor.

He ran down the corridor and discovered a world of wonder, a place that must have housed at least a hundred men at one time. There were natural grottos and great rooms that had been carved out of the rock

There were upper and lower levels and old flues that had been taken advantage of which led onward to other grottos and caverns, but always at their extremities he would find an airlock. There were living quarters, the furnishings of which had fallen into dust and rags, and here and there he found a gaping, hollow-eyed skeleton with a crucifix half buried inside the rib case, amidst the rags of garments the men had once worn.

There were machine shops and furnaces for use in metallurgy, and there were labs, glorious labs—dilapidated, but labs, with equipment that could be reactivated, delicate tools and measuring devices, instruments. If they no longer worked, they could be repaired, because there were supply rooms containing wire, insulators, resistors, transformer plates, glass blowing equipment for making vacuum tubes, vacuum pumps, chemicals. He found an early type of thermatron bank intact and still half charged. He also found two reactor power units, turned off. They could be reactivated.

There were small arsenals of weapons, also weapons which could be used at once. But he could not locate that for which he was mainly searching—upon which everything now depended.

It had to be here, or it didn't make sense.

Finally, he found a yellowed chart of the place, and immediately, from one corner of the fine lined drawing, the thing he sought stared him in the face. He ran to a certain airlock and

opened it. There was another cavern and a large door like that of a hangar. Between him and that door was the thing he sought—all of two hundred feet long.

It was the ship in which the Jesuits had arrived.

Evidently, beyond that hangar door, was a great hole in the continent which had once been the channel for active lava. The Jesuits, fleeing from their oppressors, had been forced to penetrate it, and thus they found this sanctuary, two centuries ago.

Their Messianic dream was about to be realized, vicariously, because at long last their hoarded technology was going to be used against the same forces which had motivated them in the first place.

FOURTEEN days after the Patrol's raid on Ahahdd's camp, the Venusian allies put Plan A into action, with a surprise twist at the beginning rather than at the end of the plot.

Under cover of the CO₂ belt, *Braburnii* and *Gagandii* boats brought Jesuit weapons and some special gear devised by Haufek in under the shadow of Hahddra's cone, and there on the borderlands between mists and sky they set up the base of a "bridge-head." The featured weapon, however, was neither of Haufek's devising nor of Jesuit origin. It was *Gagandi*, and it contained cosmium. The lower level Venusians had conceived of a much simpler method of handling cosmium than the whiteman's system of shielding. They kept it in solution, in

which state its mass was not yet critical. By means of the application of chemical heat they caused the solution to boil off. As the cosmium solvent boiled off, the remaining solution would finally reach the point of precipitation. When the cosmium precipitated, it acquired critical mass and detonated. Hence the nick-name, "boilers," originated among the whitemen participating in the Venusian Second Front offensive. In times past, the *Gagandii* had loaned Ahahdd's people a few "boilers" to obliterate Earthman stations. Now the deadly "boilers" were going to have a more formal unveiling.

A much larger contingent of men and equipment had moved in toward Colonial Headquarters, which were located on the southern continent of Novaterra—so named by the earliest Earthman explorers of Venus. Here were the mooring points of the sky islands, and here were the space station facilities, the Colonial Patrol Garrison, the uranium storage sheds, ammunition magazines, the arsenals, repair shops, interplanetary communication towers and the nuclear energy plants.

On "A-Night," when the grand offensive was to be launched, the monitors at Colonial Headquarters detected the presence of a space ship above Novaterra. The ship was two hundred feet long, which represented the length of a common class of local Patrol ships. Inasmuch as the monitors were always indicating the locations of Patrol ships, no alarm was given. To the unthinking robot senses

of the monitors, nothing was abnormal. They had never had a stimulus-response circuit built into them for detecting enemy ships, inasmuch as there were no enemy ships—nor had they ever heard of the Jesuit legend. So it was a case of nothing being as well hidden as the obvious.

When the ship came within phone range, human operators hailed it in routine fashion. However, when there was no reply it was too late to do anything about it. Haufek had rigged up a replica of the paralysis weapon used on the *Surprise*. All ground facilities were incapacitated. Simultaneously, Peter Puckett and other Teranians and Earthmen led *Braburni* war parties up out of the borderlands to the magnatram stations, where they boarded cars for the ground center of the Colony. At the same time, Patrol ships in the vicinity of Hahddra were alerted by a blinding explosion that shook the sky as well as the earth. The whole top of the extinct volcano was blasted into dust. When they drew in toward the scene of the blast, paralysis struck them as the result of another Haufek set-up on the borderlands of Hahddra. As other Patrol ships centered in on Headquarters, their crews also blanked out.

The sky islands, of which there were three, were totally unprotected. It was a simple matter for the invaders on the ground to haul them down, until the operators on one island fought the action by opening up their gravitron tanks to full power, which ripped up the mooring machinery below. As they started skyward, how-

ever, they were faced with the worse dilemma of plunging into outer space. Since they could not possibly hope to navigate out there, they sank back to the ground and surrendered.

ENRIQUE FORRAL sat behind the ostentatious desk of his palatial office, a machine pistol quivering in his pudgy, blue-veined hand, his wide, blood-shot eyes watching the door. It was a tungstitanium door, light to handle but difficult to demolish. When it began to glow with heat and he saw rivulets of metal running down its surface like so much molasses, he screamed and dropped his gun.

"I surrender!" he screamed. "Don't kill me!"

"Then stand back and no funny business!" came a voice from beyond the door.

It was too late to open the door for the invaders. It was too hot. Forral could only stand there and watch it melt. Thermosonics, he thought swiftly. Strictly a war weapon not included in Colonial Garrison ordinance. Then Lorena had told the truth, after all! The Hahddra prisoners had made a deal with the *Gagandii* and found the Jesuit citadel.

He cursed himself for a fool. He had not wanted to admit to Central Government that he was facing trouble he could not handle. He had not called for help, and now it was too late.

A gaping hole opened in the door, and a red-bearded giant with a scarred face and broken nose leaped

through carrying a strange, multi-purpose weapon in his hands. He was seven feet tall, broad shouldered, and expressionless, except for a cold gleam of deadly hatred in his brown eyes. Although he had never seen this man before, he knew he was Larry Buchanan, Cardwell's arch enemy, the prisoner who was supposed to have been "taken care of," sold into slavery that was to have ended in death in a uranium mine.

Behind him were Earthmen, no more friendly than their leader, and behind them he saw the war hides of the *Braburnii*. Forral's flabby chin trembled. With mouth agape and eyes staring, he backed against his desk, watching Buchanan, speechless.

"Before you die," said Buchanan, "I want the latest news. What's the status of the Interstellar Fleet?"

Remembering the Interstellar Fleet, Forral took courage, momentarily, and he was strengthened by a sudden flood of righteous indignation. His thin lips tightened and he straightened up. "You're only digging your own grave," he said, imperiously. "You'll never get away with this!"

"I asked you a question," said Buchanan, icily.

"The Fleet? Ha! Perhaps you thought you could sacrifice a few thousand *Braburni* tribesmen on a Second Front that would divert Cardwell's forces from your own planet. Well, you're wrong, because the new Interstellar Fleet left for Teran over a week ago. But as far as your own local forces are concerned, Solar Patrol will handle you. You'll all be fer-

reted out and obliterated. What's this going to gain you?"

"That's our business. Where are the prisoners your Patrol captured when it raided the camp of Ahabdd two weeks ago?"

Forral's eyes narrowed. Aarri, his half-breed daughter, had been among those prisoners. "What do you think? They're all dead."

Buchanan's face strained taut with the effort to control his emotions. "You lie!" he shouted.

"Can you prove it?" sneered Forral.

Buchanan's teeth showed between his lips as he stepped forward and grasped Forral by the front of his lounging jacket and almost pulled him off the floor. "You little, rotten, putrid lump of garbage!" he yelled. "You're going to meet your Maker! It won't do you any good to lie! Where are those prisoners?"

Behind the overwhelming anger of the man, Forral detected a strange note of desperation, of frantic pleading. Evidently the secret knowledge of the fate of the prisoners was a last ace in the hole, so he clutched at it.

"Then if I tell you," he retorted, "it will be on my own terms."

"He gets nothing!" yelled one of the Earthmen.

Just then, there was a commotion, and into the room stepped a huge *Braburni* warrior, almost as large as Buchanan. He came in like an angry emperor, and his own men and the Earthmen respectfully made way for him. Forral stared at first uncomprehendingly, not knowing who he was,

until he noticed the emerald between his brows. Then he lost his momentary decorum and seemed to wither in horror.

Ahahdd said nothing. He merely stood there glowering at him, drinking in the vision of him as though to add to the fires of his hate. It gave Buchanan an idea. He beckoned to an interpreter.

"Tell Ahahdd," he said, "that he must make Forral tell where the prisoners are. After that, we will rely on his judgment as to what he does with the Governor."

As the interpreter gave this message to Ahahdd, Forral fell on his knees. "No!" he cried, pleading with Buchanan. "You can't leave me with him!"

"I wonder," said Buchanan, "if anyone ever pleaded with you for their lives or for their honor. Now you take Ahahdd's mother, for instance—"

"No!" shrieked Forral. "Don't do this to me, for the love of God!"

Buchanan met Ahahdd's narrowed eyes, and the latter nodded to him almost imperceptibly. The Earthmen joined their *Braburni* colleagues in a grim, satisfying smile. Buchanan went out with them to attend to other business.

FIFTEEN minutes later, a *Braburni* warrior asked Buchanan to follow him. They left the sky island, which had been grounded, and trotted through the busy streets of the invaded colony. Finally, at the end of one street, they had to shoulder their

way through a crowd of *Braburni* warriors. The prisoners were there, already being briefed on Plan A and given weapons.

Buchanan threw pride to the winds and asked for Aarri. She stood there in their midst, attempting to be aloof, but he took her by the hand and led her away from the others.

When he had her alone to himself, he turned to her swiftly. "There isn't time for talk," he said. "I was wrong about you. I hurt you and I'm sorry."

She stood there looking up at him, searching his eyes. "If Haufek make star ship," she said, "how soon you go?"

"Four or five Earth years."

Tears filled her eyes. "Oh La-ree, I wish your heart not be so far away beyond the sky!"

He drew her to him and kissed her.

A *Braburni* warrior found them and began speaking to Aarri in his own language.

"Ahahdd calls me," she said to Buchanan.

"What does he want?"

Her manner was changing subtly into something savage. Her eyes looked through him rather than at him, and he read hatred there mixed with triumph.

"It is a brief ceremony, with his medicine men, concerning the gods. They are sacrificing something to the spirit of my dead mother."

"Sacrificing! What are they sacrificing?"

"The heart of Enrique Forral."

CHAPTER 25

PLAN A was completed with the obliteration of all installations on Novaterra. Before the "boilers" were planted, however, the colonial employees and the garrison were herded into two sky islands. These were activated to the point of level bouyancy and were towed through the sky to the remains of Hahddra, where their gravitrons were destroyed and they were anchored. Here they were abandoned, but their human occupants were permitted to hope for rescue by forces from Earth.

Vital scientific supplies, weapons, ammunition, whole thermatron installations and a complete new reactor were transported to the secret continent in captured Patrol ships, and Forral's own sky island was appropriated as a living abode for the remaining Earthman and Teranian rebels on Venus. The island was not moored in the sky, however. On the contrary, it was submerged in the mists of the lower levels and camouflaged with one of Haufek's anti-radalax "gimmicks."

Project Astra was well on its way by the time retaliation struck from Earth. The Solar Patrol ships never knew what hit them. Central Government could only guess at the truth, since Forral had never warned them. The devastation wrought by the *Gagandi* boilers was their first clue, after small spy ships succeeded in reconnoitering Novaterra and Hahddra. Later, when another Solar Patrol offensive was launched, the castaways

on Hahddra were rescued, and the whole story came out.

Cosmium, a total Venusian alliance, Jesuit science coupled with the brain of William Haufek—all this called for a great council of war. And so the long siege of Venus began. Each time the attacks were launched by Central Government they took their toll of the *Braburni* defenders, who were led by trained Earthmen, operating under a wartime governing commission headed by the St. John brothers. But each succeeding time they came they found an ever growing strength in equipment and technology. And in the meantime thousands of *Braburnii* and *Gagandii* toiled in mines of their own, bringing to Project Astra the materials required by Haufek.

Earth was busy preparing an auxiliary fleet to back Cardwell up in case of setbacks in the Alpha System. An all out war against Venus was too expensive. They adopted a plan of waiting and spying. Sooner or later, Haufek would show his hand. Then they would strike with special weapons held in reserve.

THE years passed in universal waiting tension. Venus had reverted to its ancient role of impenetrable mystery planet, but was constantly watched for signs of the danger that was brewing beneath the shroud of its clouded skies. Cardwell's mighty fleet of a hundred new super battleships hurtled across the great gulf, month after month and year after year, at a 95-C velocity—an irresistible force. But there in the skies of the South-

ern Hemisphere of Earth was a malignant eye, the baleful, waiting eye of Alpha Centauri—the living, monstrosously intelligent eye of The Alpid, who seemed to wait like a giant cat with its suckling brood of Teranians—Lydecker's Independence Party, which was waiting to see the whites of Cardwell's eyes.

The six billion inhabitants of the Sol System took more than a vicarious interest in the circumstances involved. A question had arisen in the mind of Man: if Cardwell failed, would it mark the end of superiority for *homo sapiens*?

Who or what was this *thing* that had been born on Teran as the direct result of violence? Was its bizarre danger reality or hysterical imagining? Time would tell, and time was growing short . . .

ONE night on Venus a simple event occurred that was unknown to the waiting worlds outside. A tall, gaunt Teranian with blond hair and pale blue eyes laid down a screwdriver on the control board of a converted space ship. He tested a simple instrument and then looked up at his three companions, Buchanan, Puckett and Aarri.

"It is finished," he said. "There's nothing left but the tests."

Buchanan looked at Puckett and then at Haufek and finally he broke out into a sad grin. "How many years ago was it that we plotted this, back on board the *Carlona*? It was only a theory then."

"Too long ago," mused Puckett.

"What is it—twenty years—twenty-two?"

Haufek's brow wrinkled up as he reached for a stim. "Now wait a minute. I said we're ready for *tests*. If the tests should go wrong, we might be blown into something far more intangible than a theory."

Buchanan said, "Well anyway, congratulations, men!" He shook Haufek's hand.

They shook hands all around. When Buchanan turned to Aarri, he found her staring at him, dry-eyed and forlorn. He took her into his arms and kissed her. Her arms went about his neck and she returned his kiss fervently, grasping desperately at the memories that a few brief years had given her.

She said nothing, but when Buchanan again turned his attention to the ship's control board, she silently left the room.

"I've got an idea," said Puckett. "Instead of telling the others we're ready, why not make the tests first? All we're going to do is drop out a ways into space and launch your remote control models. If they work, we know the ship will work. Then we can come back and say goodbye. We're loaded with supplies already."

Haufek looked up at Buchanan. "What do you say, Larry? Why not give the folks a complete report?"

Vague apprehension assailed Buchanan, but since he could not pin it down to a logical reason he shrugged. "Okay with me," he answered, finally.

Puckett gripped his arm, unable to contain his enthusiasm. "Do you

realize what it means if we succeed? We can hop across space in a flash—play leapfrog with the stars! We can get to Teran ahead of Cardwell, join Lydecker with our new weapons, even hop back to the Interstellar Fleet and give 'em hell out of nowhere!”

“Yeah? By my reckoning, Cardwell's about a month from being in striking range of Teran. Maybe we'd better get busy instead of yapping.”

They went around checking the ship. No one was on board. The hangar was empty. They closed the airlocks and started the gravitrons.

The sky island was beneath the CO₂ belt, so no one saw the ship rise silently toward outer space. In its belly was the most powerful cosmium energy plant that Man had ever dared to build.

Unknown to the three experimenters, ten first line battleships from Earth had established orbits around Venus, maintaining eternal vigilance against this moment. When the experimental ship emerged into space, the nearest battleship detected it and alerted all the others. They began to converge rapidly in its direction.

Once Haufek had placed his ship in an orbit, he turned his attention to the two models. Each one contained a miniature replica of his inversion drive acceleratron, which, when activated, would give the model such a terrible, near instantaneous acceleration that all matter contained in its field would tend to acquire infinite mass. Haufek's equations told him that Nature would take a course of least resistance under these condi-

tions, and invert the matter thus affected to contraterrene, spreading the titanic expenditure of energy out over a long, straight line through space, not violating the C-velocity speed limit, but causing the model to arrive at another point through what must be the equivalent of so-called “hyper space.”

Or, failing this, the force released would tear the model into atomic shreds.

The men were so intent upon their preparations for the experiment that they failed to notice the signal lights on the control panel for some time. Finally, however, Buchanan gripped Haufek's arm. He pointed to the flickering lights.

Wordlessly, the three of them went to their posts—Haufek to the navigating controls, Buchanan to the visiscope and the radalax, Puckett to the weapons board.

“Big ones!” Buchanan exclaimed. “Battleships—half a dozen of them. No, there's another one, and another! They must have been waiting for us!”

“Let's scuttle for home,” said Haufek, flipping switches.

“Too late!” exclaimed Buchanan. “They're here!”

Just then, all three men sensed an inaudible vibration and began to go numb. The enemy was using their own weapon of paralysis. Puckett and Buchanan stared at Haufek. They watched him, fascinated, as he flipped switches on the control panel which activated the acceleratron.

The answer was obvious. It was too late to withdraw from the battle.

Their interference generator, which could have counteracted the paralysis, was not even connected yet—a tragic oversight about which it was too late to cry. The enemy had the distinct advantage of surprise and power, even against their advanced weapons. And more important than anything else—Haufek's new drive could not fall into their hands.

Puckett and Buchanan sweated cold sweat in the imminence of possible violent death if the experiment failed, but they nodded silent agreement as Haufek reached out and pressed the final button.

Consciousness went out of them almost with an audible "swoosh!"

HOMUNCULUS in a bottle . . . Adrift in a sunless, starless sea—the seventh sea of a lost world beyond Beyond. Eternities? Time was a word without ideation. There was simultaneous forever, an endlessness contained in a dot. A dot that imploded into nothingness and left—galactic gulfs that were swallowed up like so many microscopic bacilli in the gaping maw of emptiness never visited by Creation. Endlessness beyond the end of all things—waiting for Beginning that approached from a distance measured by forever, which was meaningless yet the totality of reason.

Buchanan was unaware of how long he lay there in the control room, conscious, without realizing he could open his eyes and look around him. The common, ordinary stimulus of hunger finally stirred him to physical

action. He sat up, shook his head, and blinked.

He sat there for a while, trying to get a grip on what it was he was supposed to remember. Something had happened, of titanic proportions, something that had cast a new die for all things that comprised his world. He saw Haufek lying on his face near the pilot's seat in front of the control board. Puckett slumped in his padded chair before the weapons board.

Weapons!

Buchanan got to his feet, remembering the battleships. The signal lights on the panel were quiescent. He tried the visiscope.

An endless wall of stars met his eyes. He looked at the radalax oscilloscopes, all of which held a fixed monitor sinewave pattern, indicating that the detectors were on but were encountering no foreign bodies. The battleships were gone. He did a double take at one oscilloscope which should have shown a full lacework of waves indicating Venus.

Venus was gone.

For a full minute, Buchanan used the visiscope, rotating the scopes in the forward and aft robotories through every possible arc. There was not a planet in sight. They were in interstellar space.

Buchanan turned to his two companions and worked on them, slapping their faces, shaking them. Puckett was the first to revive.

"Wha— Where are they?" he muttered.

"Petel Wake up! We made it!"

Puckett stared at him, then sud-

denly acquired the full use of his faculties. He jumped up and looked at the instruments. Then he went to the visiscope. Buchanan continued working on Haufek.

"Holy jumping Jehosephat!" yelled Puckett, his eyes glued to the binocular eyepieces. "This is interstellar space!" Then he paused to look at the chronometer, which was working normally. "Unless it's a coincidence, we've jumped a couple of light years in about a minute!"

"It was probably near instantaneous," said Buchanan. "We've just been out for a short time, but it seemed like forever."

"You can say that again! I thought I was pinch-hitting for Father Time!"

Haufek stirred and opened his eyes. The two men helped him to his feet. By the time they guided him to the visiscope, he was fully conscious.

"Did we do it?" he queried.

"See for yourself, Billikins," said Puckett. "We didn't do it. *You* did!"

"We're out there, all right."

"And I'm hungry," said Puckett.

"Just a minute," Haufek interrupted.

The other two looked at him, then at each other, and waited. Finally, Haufek straightened up.

"You look funny," remarked Buchanan. "Why so pale?"

"I—hardly know how to express it," replied Haufek, "but—there are no familiar stars out there . . ."

Buchanan and Puckett almost collided, trying to use the scope simultaneously. Three minutes later, they

both faced Haufek in grim silence.

"I don't even know if we're in our own galaxy," he said.

"Oh for God's sake, we can't have jumped that far!" exclaimed Puckett.

"I threw in maximum power," replied Haufek. "Maybe we can try some shorter hops and look around."

Buchanan remained silent. He was thinking of two things. He had left Aarri without really saying goodbye. When he would see her again, if ever, was now conjecturable. Then, too, if they could not locate themselves and get to Teran soon they would be too late. Too late for everything . . .

The three of them forgot about their hunger during the next hour, while Haufek manipulated the ship through space. They had no way of telling how far they went, but they did keep score on the number of jumps.

"On every uneven jump, we're contra-terrene," Haufek told them. "We'll have to remember that. On every even numbered jump we're terrene."

Nebulae, star clusters, double suns—the flaming heart of a galaxy was penetrated, but no familiar celestial object or group of objects came into view.

Haufek finally turned to them. "Shall I say it?" he asked.

"I'll say it for you," replied Buchanan. "We're lost."

"In some other universe," put in Puckett.

Haufek shrugged, but he was far from nonchalant.

"You know what?" said Puckett, at length. "I'm going to have something

to eat."

"Might as well," said Haufek.

Buchanan said, "I'm not hungry."

He looked back into the visiscope and scanned the unfamiliar starfields again. Far out in the black places were little, distant blobs of light—other island universes. Somewhere in the bottomless well of Creation—

It was like searching for a specific grain of sand in a desert, with an endless number of deserts to choose from. He was unable to make a comparative test of his various motivations. Anne, the woman he said he'd come back to. Cardwell, the man he had to kill. Teran, the world he sought to save. And Aarri, to whom he had not even said goodbye.

"Aarri," he whispered.

But the infinite depths of space could not even send back an echo . . .

IT took them two months to work out a semi-reliable system. By use of photography and charting of new constellations, they orientated themselves in the midst of the unknown, established points of reference, calibrated the acceleration controls for distance, learned how to control direction, established experimental courses in various directions, followed them, and returned to their starting point to try new courses.

They learned how to emerge from the galaxy they were in. They carefully checked on the distances of all visible island universes and marked down ten of the nearest ones for investigation. They had a secondary list of twenty-eight other galaxies

slightly more distant. There was nothing else to do but try.

In the course of their wanderings, they recorded their various courses, taking the first galaxy they had landed in as a point of reference. They discovered a number of promising solar systems and some not so promising, but nowhere did they discover the signs of a thriving interplanetary civilization. They landed on certain worlds, some of which were no larger than Mars and some of which were larger than Teran. Some had frozen atmospheres, some none at all, or they possessed atmospheres consisting of poisonous gases only. But there were worlds which they referred to as "carbon-chained advanced." Here were the signs of advanced biological evolution based on carbon, hydrogen, oxygen and nitrogen, with basic energy production based on common photosynthesis—chlorophyll, green plants absorbing normal, healthy, solar energy and converting it, breathing in CO₂ and exhaling oxygen, building a breathable atmosphere and a protective ionosphere. Worlds that were fertile and virgin, waiting for Man.

There was one planet, slightly larger than Earth, which contained an almost breathable atmosphere but which was too heavily laden with carbon dioxide. It was a compromise between normality and the CO₂ belt of Venus. When Buchanan observed this he began to laugh, bitterly.

"That's all right," Puckett told him. "Go ahead and let it out, boy, this is getting me, too."

"You don't know what I'm laughing about, and I shouldn't be laughing at all."

Haufek looked up from his instruments. "Well, let's have it," he said.

"I'm recalling the promise I had to make to the *Gagandii*."

"Hey! How about that? You never did tell us," put in Puckett.

Buchanan produced a wry grin. "Look at me. I'm a planet merchant. They asked me to find them another world. For a number of generations they've been trying to mutate into oxygen breathers, but the correct adjustment is a long way off yet. You've heard of the African lungfish. Well, they have rudimentary lungs, but when some of their best mutations have tried to crawl up out of the CO₂ belt they have run afoul of too much oxygen. Burned them up. So they had a choice of waiting thousands of years more for the correct mutation or—which was more hopeless than that—of finding a compromise in the way of environments, an in-between sort of atmosphere that would enable them to take advantage of their lungs right away and live where they could see the stars and become astronomers. The crawly devils have a strong racial instinct for expansion. When I told them about the possibilities of this ship and when they knew its success depended on two things they could give us—namely, cosmium and the Jesuit labs—they made me promise to search for a world that would suit their immediate needs. And there it is!" He waved his hand at the viscope. "All what the doctor ordered,

waiting to be inhabited."

"Well?" queried Haufek. "Why the demoniac laughter? Later on we might be able to get some help and build a few extra ships. When we get time, it's conceivable that we might be able to transport some of them here and let them get started."

"Oh yeah? That's why I'm laughing. I used to think their request was impossible, but now that we've actually stumbled on what they want, the impossible part of it all seems to be in finding the *Gagandii*. Where in hell are they?"

CHAPTER 26

THE FIFTH galaxy they visited was the one they wanted. After four months of traveling farther than any man had ever dreamed of, they discovered themselves to be in home territory. They were hundreds of light years from their own section of the known galaxy, but to them it was similar to being in one's old home town and merely looking for the right street and the right cottage with the white picket fence around it. At the end of one short hop, when they found themselves within gravitron traveling distance from the vast nebula in Orion, they were practically knocking on the old homestead's front door. Visible in the depths before them shone the steady eye of Sirius and, at last, the two little suns, Sol and Alpha Centauri, seemingly so close together that one might have thrown a stone between the two.

Yet Buchanan remembered a long,

six year voyage he had taken to get from one to the other, traveling at about eighty-five percent of the speed of light.

Haufek hopped the ship once more, an even numbered hop, making them *terrene*. Some of the worlds they had landed on were *contra-terrene*, and they had been able to land there because they, themselves, were *contra-terrene*. But now they were back to normal again, and the last inversion hop had been made. They could make it now to Teran by sheer fall boosted by rockets—within a month. The disc of Teran was visible in the scope.

Buchanan counted the years. Six years to Earth. Thirteen years in prison. Close to seven years on Venus.

After twenty-six years, he was coming home. His "whistle stop" on Mars had expanded into the biggest adventure of his life and the greatest voyage ever taken by his species. Mars, Earth, Venus—and five new galaxies.

But what had happened on Teran during his long absence? Especially during the past few months. The Interstellar Fleet had had time to strike, after all. The answer lay before him—not far away . . .

THEY came in over Sylvania, the channel and the peninsula where the Center and Annex of Astra City had been. Center Annex was a mouldering heap of rubble. Center, itself, was non-existent, a blasted hole filled with seawater. Beyond lay the Gilbert Mountains and the snow-capped ridge of the Henderson Divide. These greater monuments to Nature always

remained behind in time to look back upon the folly of Man.

The outstanding feature of Teran as they saw it now was its stillness. There was no air traffic, no sign of life on the ground, and no radio traffic. Their signals elicited no response. Some of the rural areas where small residential communities had once been located were again mere heaps of rubble. They saw whole mountainsides which had been denuded and blackened by fire.

But when they came in sight of Lake Catherine, Buchanan tensed visibly. The rambling house was still there. Cardwell would not have blasted that. His pulse began to race when he discerned a skycar parked in the landing area below the house. Their first sign of life!

"Suppose you guys leave me off here and continue scouting around," he said.

"Need some help?" suggested Puckett, watching him closely.

Buchanan looked at him. "Why?"

Puckett shrugged. "There's no trace of the fleet around, but Cardwell might be home."

"So?"

Puckett and Haufek both stared at Buchanan. They looked at his thick, red beard and his battle-scarred face. He was slightly heavier than in the old days, somehow a bigger man all over. It was mostly in his eyes where you could tell. The vastness of years, the tempered hardness of suffering, hatred and longing in *crescendo* at the end of a long, long trail.

"I know the score, Larry," said

Puckett, "but let's be reasonable . . ."

"This is where I get off," said Buchanan. There was something in his voice and manner that was like a cold wind.

The ship lowered on its gravitrons, crushing trees at either end of the small landing area, and Buchanan jumped out of the lock to the ground. In his hand was a common variety of machine pistol.

He paused for a moment, trying to realize that he was standing on Teran, the planet of his birth. Slowly, he looked up and watched the ship rise into the still air. It hovered up there, waiting. The traces of an appreciative grin appeared about the corners of his mouth, but when he looked up at the house again, his face lost all expression and his eyes flamed alive.

Up there on the veranda, the tall figure of a man. Broad shoulders, black hair—the exact size and shape of Vincent Cardwell. He had a machine rifle in his hands and he was watching both the ship above and the figure on the landing field below.

Buchanan's fingers tensed around his machine pistol. He started toward the house. As he did so, the man on the veranda started toward him.

Why do I have to kill him?—Buchanan was thinking. The answer came calmly into his mind. Because you can't live with the complex that says you can't. You are a prisoner of yourself until you can kill Vincent the Invincible. His death is your only freedom.

It never entered his mind that Cardwell was Public Enemy Number

One, in all Man's known universe. Cardwell, the Teranian Benedict Arnold who had sold his people down the river and helped build an interstellar system of slavery—Cardwell, admiral of the fleet which had destroyed his own native world. The man with the Midas touch, who had sold him into an assignment of death. Vincent the Invincible.

Buchanan's steps hurried up the path. As his opponent came suddenly into close view, he raised his weapon to fire, then stopped.

The tall Teranian stood there, also ready to fire, staring at him. It was Cardwell, all right, but a much younger Cardwell. His image. Even as Buchanan looked, an exact replica of the first man stepped to his brother's side.

The twins! Twenty-six years had brought them from infancy to manhood. Buchanan trembled, lowering his gun, and for the first time became fully aware of the fact that he was over fifty years old. Though in these days such an age was still on the borderline of one's prime, he felt old—old as the stars.

"Who are you?" asked the first twin, in a full, masculine voice. "Are you from—the Base?"

Buchanan stood there taking them in, and his eyes misted. Had Fate rounded one more corner, these boys might have been his own sons. The murder lust went out of him momentarily, when he realized he had come near to shooting one of them.

"I am looking for—" He was about to say, "your father," but instead he

said, "your mother—Anne Cardwell."

The twins did not budge. "That still doesn't answer my question," said the first twin. "Who are you, and where did you come from? What's that ship doing up there? Who's is it?"

"My name is Lawrence Buchanan—"

The second twin placed a hand on his brother's arm. "Buchanan!" he exclaimed, as though the name held a lifetime of meaning. On Teran, the name was part of history.

"That ship up there," continued Buchanan, "involves a long story. It is seeking contact with Howard Lydecker."

The first twin's grip on the machine rifle relaxed. "Come up to the house," he said. "We want to talk to you. There's a transmitter there. We didn't answer your previous calls because we did not want to reveal our position until we knew who you were. You can tell your ship that Lydecker's headquarters, what's left of it, is located on Mount Grant in the Hundred Islands."

Buchanan suppressed a surge of elation over the fact that Lydecker still lived. "And your father?" he asked, as gently as possible. "Where is he?"

"We never knew our father. Every vessel of the Interstellar Fleet has been destroyed. We think—he is dead."

Buchanan was silent for a moment. He was painfully aware of having been cheated. Cardwell was neither dead nor alive. He was a mystery—

which he would have to investigate later.

"But what about your mother? Is she here?"

"Yes. She is here, but—"

Buchanan lunged up the path. "Then what are we waiting for?" he asked.

He was ahead of the twins before they could detain him. The first one started to overtake him, but the second one held him back.

"Maybe it's the best thing to let him walk right in," he suggested.

"You're wrong," said the other. "She must never know. Come on!"

ANNE CARDWELL looked up slowly when the man came into the den and stood before her. She saw a tall, powerful man in the late years of his prime, an ugly, red-bearded man with a broken nose and a bad scar under one eye that pulled it down slightly. He might have been a pirate out of the pages of ancient story books, except for his eyes. She had known a pair of eyes like that once, but these were slightly different. These could be kind, like those other eyes she had known, but they had seen too much of death and violence, and they could hate. Just now they were ludicrously bewildered.

As her two sons, Ralph and Andrew, came into the den behind the stranger, she laughed. "Who is this man, boys?"

As they did not answer, the stranger said: "Who are you?"

He saw before him an old woman seated in the kind of old and com-

fortable chair that is reserved for the aged. Her hair was white. Her face was wrinkled. He had no desire to meet someone's grandmother. Where was the tall, stately woman with the black, midnight coiffure and the blue eyes that held the only world he had ever wanted?

The old woman smiled. "I am Anne Cardwell," she said.

Buchanan swayed like a tall tree in a storm. The two young men grabbed him and led him outside. They led him down the trail to a shaded platform where there were a number of rustic seats made out of the yellow-wood tree. Here they sat him down and he stared into space like a victim of shock. His hands hung limply between his knees.

Finally, he brought his hands to his face, pressing them tightly against his flesh, as though to stifle a cry of anguish.

"Don't ever let mother know what she really looks like," said Ralph, sitting down in front of Buchanan. "Psychologists have explained it to us. You gave her a dream to live for once. You said you would come back to her. When the years passed and you did not and people kept telling her you were dead, she refused to believe either that you were dead, or that you would not return. Without the dream she would have lost her mind. So a mental defense mechanism took over—self-delusion. She began to believe she was the girl you had said good-bye to, and that nothing would change until you got back. But each year of waiting was like a life-



Anne Cardwell

time, too, and her twisted delusions brought on an acceleration of senility. She doesn't know it because when she looks in a mirror I guess she still sees herself as she was when you knew her."

"If you go to her and insist on identifying yourself," put in Andrew, "it may be the end of her magic mirror. The shock of reality would kill her."

Buchanan's hands dropped away from his face. His eyes were dry. "Too many years have passed," he said, in a strange monotone. "My dream is gone. It died today. But hers is worth far more than its own realization, even if that were possible. Let her keep it. Don't tell her I was here."

"You wish—to return to your ship and find Lydecker?" asked Ralph.

Buchanan looked fondly at both of them. "You boys said you wanted to talk to me," he said.

"We do! Ever since you and Puckett and Haufek bombed Earth's moon, we thought you were dead, but now that you have returned—"

"I want to talk to you boys also, but—can it wait? Say until tomorrow?"

"Yes. We have waited all our lives."

"Then tell the ship to go on. That's Puckett and Haufek up there. Tell them where Lydecker is. They can contact me later."

"What do you want to do?"

"I want to borrow that boat I saw down by the dock."

Buchanan spent the rest of the day out on the island that had once been his and Anne's. There, whatever he did, was private. If he cried, prayed or slept, no one ever knew. And up at the villa above the lake an old woman sat in an old chair and chuckled to herself, wondering about the strange, ugly man with the hauntingly familiar eyes. When it was time for her afternoon broth she had forgotten the man—but a golden dream of youth and a pleasant faith in its fulfillment remained with her.

TWO days later, the twins flew Buchanan toward the Hundred Islands and a prearranged meeting with Lydecker. En route, however, they took him to the southern tip of Sylvania where he began to see hundreds of thousands of Alphids at work. Here were strangely designed buildings of gleaming metal, or plastic, he could not tell which—a sprawling young metropolis inhabited

solely by Alphids. And beyond the buildings was the vast skeleton of a ship that was fully a mile long.

"My God!" Buchanan exclaimed. "What and whose is *that*!"

"It is some kind of super space ship is all we can say," said Ralph. "The Alphid is building it."

They had briefed him on The Alphid. He was definitely not a myth. The sight of those formerly harmless little Alphids working below with such calm purpose, exhibiting a technology that appeared to compete with that of Man, suddenly filled him with instinctive dread.

"Can you go close?" he asked.

"No. The Alphid's laws are quite simple to understand. We can go thus far and no farther. Those who have tried ceased to exist."

Buchanan felt the hair at the base of his neck try to stand up. "But—can you talk to this—this Alphid?"

"Lydecker has—maybe a few others. But that's all over with. Communications have ceased."

"Well, what's the score? What's he really after?"

"We're not sure, but it's mostly bad. The long, peaceful association experienced by Alphids in relation to ourselves here on Teran seems to be to our advantage, for the time being, but the attack of the Interstellar Fleet has identified the Sol System with violence and danger. That's what touched off this ship project. In spite of the fact that Lydecker's forces *and* The Alphid completely demolished the attacking fleet after its first strike at Teran, we gather

that The Alphid wants to beat some cars down in the Sol System so that there will be no recurrence of violence in the future. Maybe his plans reach farther than that."

"What do you mean?"

"Ask Lydecker."

Buchanan studied both of them and wondered what they were really afraid of, or what they were trying to conceal from him, or what they were afraid to admit. That they were on the right side of the fence now was evidenced by the fact that they were active officers in the Army of Independence. They had joined the revolt against the forces represented by their father long ago—partially as a result of having absorbed from their mother a hatred for him with which they had been nurtured. They had spent all of their formative years with their mother, and when their father made his first appearance it was one that shook their world and sent their people into hiding. They had sought out Lydecker voluntarily and had served him ever since.

AT the great headquarters base on Mount Grant, Buchanan ran into a few of his old friends, in the company of Haufek and Puckett and the Cardwell twins. There were Albert Olmstead, Alfred Makowski, George Winzer, Dr. Ed Jayne, and later he even discovered that same Dr. Fernandini whom they had shanghaied out of Martanium so long ago. He was Lydecker's right hand consultant—a full-fledged Teranian citizen. But he sensed that

everyone was working under a great internal tension. The Alphid was casting too dark a shadow across the immediate future.

All his old acquaintances had changed with the years, except Lydecker, himself. He was the same dynamic leader of old. In his eyes was a deathless quality of leadership and conviction, but they filled with tears when they saw Buchanan. Puckett and Haufek had already told his story.

"I have you to thank for a Second Front we didn't even know we had," he said, shaking Buchanan's hand vigorously. "Without your efforts, Haufek might never have built this wonderful ship for us, which will perhaps prove to be the salvation of our race!"

There were tables and chairs on the veranda and a well stocked bar. Haufek, having recognized the fact that his responsibilities had come to an end momentarily after years of conscientious effort and worries he had not expressed, had become plastered, possibly for the first time in his life. Buchanan wondered if Lydecker was drunk or delirious.

"Isn't that an overstatement?" he asked.

"No!" cried Haufek, staggering over to his chair with a tall glass in his hand. "Yer shavver of Mankind, ol' boy! La Ree, Shun of Fire—hup! —Shlayer of Drookh—Shtar Chief. Yer th' shtar of nexsh shapter of hish-tory—hup!"

Buchanan glared at him. "What are you giving me, Bill?"

"I mean it! You been through th' mill, boy! I made with the ship shtick and the figures, sure! But who was the boy—hup!—who did the pushin' all along? Y'came through, Larry! Y'delivered th' goods! F'I hadn't believed in yer leadership—hup!—I'd never 'v done what I did!"

Buchanan looked over at Puckett, finally, and winked. "Now he tells me! All the time I was believing in *him*! There's just one complaint to make. I think it's all spread even—except the drinks. Bill, how about mixing two Teranian Terrors for me and Pete here?"

Lydecker went on after the brief interruption. "This is the strangest war ever fought," he said. "The two contenders suddenly found themselves separated by an unexpected third party of astounding proportions—The Alpid, himself. He helped me smash the opposition, true—but has he left us the hope of fulfillment of all our original dreams? We have come to wonder if our life is our own. Yet we can't actually name The Alpid as an enemy. If you want the truth, I see it this way. His forced mutation—thanks to Cardwell and Company—has precipitated a development that will end, inevitably, in his superiority over our own species, whether we fight—or wait. In this universe, Man has reached the end of his superiority."

"So you all soak your heads in a bucket and give up without a struggle," Buchanan accused. Haufek had brought him his drink and he gulped half of it down. "You wouldn't be

the victims of a subtle job of hypnosis, would you? If The Alpid's so smart, he could get you to thinking in terms of defeatism."

"He hates violence," retorted Lydecker. "He has only one answer for it. That is ultimate violence—annihilation. We have a slight advantage of time. We do not have to wait any longer. Puckett and Haufek have told me of those other worlds you found. We have facilities here. We can build a few more ships based on Haufek's inversion drive and start transplanting civilization."

Buchanan frowned. "There's something wrong about running away with our tails between our legs."

"We don't necessarily have to do that. We just can't take chances. The Alpid is too much of an unknown quantity. After we have thoroughly established ourselves and have had more time to develop some real weapons, we can come back here and perhaps re-establish communication with him."

"Wha'dya shay, Larry? How about it?" asked Haufek.

Buchanan looked at his drunken friend. One time Haufek had dreamed of another world of their own where they could plant a new Eden free of the old seeds of violence.

"I'm going fishing," he said, "for the first time in about thirty years."

CHAPTER 27

TWO NIGHTS later, Buchanan sat alone on a rock on top of Mount Grant, smoking a stim

and looking down at Lydecker's rambling villa and the bay, under the bright light of the two Teranian moons, Achilles and Chiron. Here and there below the villa he saw lights burning in various shops and buildings, where the remaining Teranians still lived and worked for their salvation. Haufek was down there in one of the labs. working with Dr. Fernandini and Olmstead and Jayne and Makowski and others, already drawing up plans for three great intergalactic ships.

The fishing had helped him to organize his own thoughts. But he had had an unexpected little adventure that bothered him.

He had used one of the launches that the local Teranians utilized for the purpose of obtaining fresh fish. He had insisted on going out alone, beyond the reefs, where the waves were broad and deep and the spray was a refreshing challenge. There were other boats out there, but in the late afternoon of that day he had found himself alone on a relatively calm sea. Finally, he had noticed another fishing boat cruising unobtrusively along within a quarter kilometer of his. He noticed that it, too, contained a single occupant.

Idly, he had examined the other through a pair of binoculars. He had seen a tall, black bearded man wearing dark sunglasses. The latter was examining him, as well, with a pair of binoculars.

After a while, the other boat had increased its speed and departed in the direction of a neighboring island.

He had later checked that island on a map and asked some questions about it. It was supposed to be uninhabited.

Therefore, he had been asking himself ever since: Who would be hiding out on an uninhabited island within gunshot of Lydecker's base of operations? Why should the man have to investigate him from a distance with a pair of binoculars? Then why should he take off toward his hiding place in great haste, as though he had recognized Buchanan and decided on a sudden course of action.

SUDDENLY Buchanan was aware of the most peculiar sensation of his life. It was equivalent to the often described experience of Nirvanah. He knew he was sitting on the mountain-top, yet he had no sense of location. Because he was everywhere—on the mountain and in the sky—like an entity brooding over the totality of Creation.

But peace was not a characteristic of his sensation. Instead, he felt the weight of worlds on his shoulders. And the tension mounted until it seemed he would be strangled by it.

At last he received a message—a meaning without words. A flash of realization burst upon him, and he began to run down the trail toward the villa.

Long years later he was to ask himself if The Alphid had spoken to him that night, reaching out to him with its multiple intelligence, like a friend, warning him of a danger that threatened Man's precarious destiny

—but it was easy to reduce the unknown to the egotistical level of one's understanding and explain it away as instinct—or the result of pure logic.

He stopped at the villa only long enough to pick up his machine pistol. Then he headed for the hangars and the ship that had brought him back to Teran.

In the control room he saw a tall, black-bearded man examining the acceleratron instruments. The latter turned around to face him as he came in.

"Vince Cardwell!" Buchanan exclaimed. He did not ask him to get his hands up because he did not intend to capture him.

Cardwell knew this. He could see it in his eyes. The two men stood there glaring at each other, with the bitter memory of the years swirling around inside of them.

Each had the positive presentiment that this was their last meeting. But meanwhile there seemed to be an infinite time at their disposal in which to stare at each other and review their lives, each in his own manner.

"Not that it matters," said Buchanan, at length, "but how did you survive?"

"You're right. It doesn't matter. The fact is, I survived. Just before my fleet attacked Teran I received a message from Earth concerning you and Haufek and the Venusian revolution. I have been waiting ever since for you to show up."

"Yes? Well, here I am. What are you going to do about it?"

Cardwell studied the muzzle of

Buchanan's machine pistol. He wanted to sneer at him as in times past. Buchanan had never been able to kill him. But now when he looked into his eyes he was not so sure.

Suddenly, his hand went back and grasped the activating lever of the acceleratron. He grinned when he saw the expression of alarm on Buchanan's face.

"I thought this was the lever," he said. "This is a new kind of ship, isn't it? What will happen, Larry, if I pull this down?"

Buchanan's knuckles whitened around the gun, but he did not fire. Cardwell laughed.

"So I haven't got it set right. You don't dare shoot, because I can still pull the lever."

"You would be blown to cosmic dust—along with the whole mountain. Where would it get you outside of hell where you were born?"

"It gets me a chance to talk some sense into you. I want to go back to Earth, Larry. I want you to drop that gun and show me how to work these controls."

"There would be only one reason for your going back there," said Buchanan, still aiming the gun at him. "You think you can make another try against The Alpid."

Cardwell's face paled with the seriousness of his thought. "I've got to you fool! Don't you know what's happening? Are you and Lydecker still star-gazing? The human race is in danger of—of—"

"Thanks to you, yes! We're all in danger of being subjugated to the au-

thority of a superhuman intelligence. And Lydecker and Haufek and I and others are doing just what you said. We're doing a hell of a lot of stargazing, Vince. This ship is not interstellar. It's intergalactic. It'll take us out of here and we're building more.

Cardwell's mouth dropped agape. He turned briefly to stare at the lever in his hand. He let go of it—then suddenly grasped it in self-defense and turned back to Buchanan, tensely.

"You lie!"

Buchanan grinned. "No I'm not, Vince. I've been there. I've seen five other galaxies. There are inhabitable worlds out there—whole solar systems just waiting for us. And that's where we're going. But you're going to stay here. You're going to enjoy being master of a universe where Man plays second fiddle—all because of you! You made your worlds, Vince, you with your Midas touch! Where has it gotten you now? I'll make you a proposition, Vince. You always boasted about being able to make the clear, clean stroke of decision. If you pull that lever, that's what you'll be doing. You'll blow up the master pattern, and you'll kill all the men here who could build another ark of space in which to transport a representative body of humans to a new universe. Think back over your life now. What have you done to me, and to Anne, and to your sons who hate your name? What have you done to the whole damned universe? If you can pull that lever and deny your race the right to continue

the master of its own destiny—go ahead! Pull it! But if you don't pull it, I'll kill you! Take your choice!"

Cardwell saw behind Buchanan's speech. It was the final clash of their two personalities—the final test of strength between them. In the cold light of logic, it was gambling with stakes that were not the property of either. But from a perspective which lay beyond the ideation of words it was understandable—terrifyingly apparent.

This was the final shape their duel would take. The gun was there, pointing at his heart. The lever was in his sweating hand. One swift movement and there would be oblivion. If he did not destroy Man's hope of Tomorrow, he, himself, would die. Thus Buchanan placed Cardwell on a gigantic balance scale, against humanity.

Cardwell looked into Buchanan's eyes and knew he was telling the truth. Both men stood there—waiting. Buchanan's finger tightened on the trigger. Cardwell's hand clutched the lever tighter. The muscles of his arm tensed.

Neither ever knew how much time passed, locked in a silent, motionless duel, as in some surrealistic nightmare. They lived through the obliterating blast that their minds could imagine. They both saw themselves teetering on the brink of extinction. They suffered and died and came alive again to realize that they were still there facing each other, waiting for one or the other to break.

Cardwell broke. He made a swift

dive for Buchanan and Buchanan fired. He missed.

Cardwell was striking Buchanan with his fists, but Buchanan stood there and gazed at him in sudden wonderment. His mouth was bleeding from Cardwell's blows, but he began to laugh. He looked at the gun on the floor and laughed. Cardwell made a dash for the gun, but Buchanan caught him, turned him around, and struck him in the face, causing him to stagger back against the wall. Cardwell supported himself against the wall, wondering why Buchanan did not pick up the gun—why he was still laughing.

"Are you insane!" he almost shrieked.

"No!" Buchanan exulted. "I just found out something very funny!"

"Nothing's funny, damn you!"

"Oh yes it is! For twenty-six years I have been a prisoner of my own complex, the complex that made it impossible for me to kill you, Vince. I thought I had to kill you before I could be free. But that isn't it! I just shot at you now. I missed but that isn't important. The fact is, I shot with intent to kill. I am actually able to kill you. I could pick up that gun now and do it. But here's the joke! It wasn't killing you I wanted. It was to be able to kill you. I'm free at last, Vince! I've got you where I always wanted you!"

Cardwell lunged forward again, his fists flying, but Buchanan caught his head and pushed it down. He brought his knee up sharply, giving him what

he gave Drukh. But not as hard. He only wanted to stun him.

Cardwell was on his knees, bleeding through the nose. He lifted up his face, and suddenly he was pleading.

"Look! I didn't do it, Larry! I earned my keep. I chose a bullet rather than that other way out. Take me with you when you go—"

Buchanan picked up the gun and weighed it pleasantly in his hand. He admired it happily.

"No," he smiled. "That's not for you, Vince. As the old saying goes—you've made your bed. Now lie in it! You're going back to Earth!"

AFTER they built the three arks and departed for new worlds beyond the stars, Buchanan borrowed the old ship. Back on Venus he had to fulfill an old obligation. He had to tell the *Gagandii* that he had kept his promise. The arks would be coming for them one day before it was too late. Perhaps even the *Braburnii* could have a new home of their own. And as many deserving Earthmen as they could take. He had an idea The Alphid had planned it that way all along, but of course that was something he was ashamed to mention to anybody. They might laugh at him. Or then again, they might not.

Then, too, there was a very personal reason for hopping back to Venus. There was a girl there, a half-breed *Braburni*, to be sure, but the only one who could give him now the kind of love that belonged in a new world. . . .

Lost Continents

By L. Sprague de Camp

No. 9

The **AUTHOR** of **ATLANTIS***

Mariners all, declare

Where those lost islands lie,—

The Fortunate, the Fair,

Under what shining sky,

Robed with what shining air?

Noyes

SO far we have bent our attention upon the story of Atlantis itself, and sought through time and space for real events and things to match those of this colorful narrative. For all our efforts we have not achieved any very positive results beyond the statement that Plato might have obtained ideas from accounts or traditions of the real Tartessos or Carthage or Minoan Crete.

We have learned a good deal in a negative way—that is, we have eliminated a lot of possibilities as unlikely or impossible. We know now that Plato could not have been describing a real event, in any literal sense, because according to all the geological evidence his Atlantic continent never existed and no continent ever disappeared in the way he described. Furthermore, the arguments of Atlantists

to prove the Atlantean origin of all civilization, from cultural similarities between various peoples, are quite useless for that purpose. These arguments, based upon mistaken ideas of archeology, anthropology, mythology, linguistics, and kindred sciences, are at worst ridiculous and at best can be used with equal ease to support entirely different theories, such as the diffusionist or the continental-drift hypotheses.

It is time, however, that we came to some more positive conclusions about the lost-continent question. Perhaps we can get a firmer grip on the Atlantis problem if we shift our focus from the modern printed page to the original *Timaios* and *Kritias* and to the man who wrote them. Plato was after all not a disembodied Voice of Eternity but a human being with a busy brain full of the knowledge and the error of his time.

If you like you may imagine him

*Slightly condensed from *Lost Continents: The Atlantis Theme in History, Science, & Literature*, by L. Sprague de Camp; Phila.: Prime Press, 1952; copr. 1952 by L. Sprague de Camp.

sitting in his house in Athens, then a crooked little town of stinking muddy streets, from which the Akropolis, beautified by Perikles a century before, rose like a tiara on a garbage-heap.

"The solemn Plato," scratching away at his papyrus and musing on the might-have-beens of his long life, is a stocky, full-bearded figure, well-preserved for his seventy-odd years. It has been many decades since he dabbled in politics, wrote a lot of dubious love-poetry, wrestled at the Isthmian Games, and was decorated for his bravery in a battle with the Delians. His contemporaries have recorded his robust figure and soft voice; they sometimes made mild fun of his intense seriousness and his restless habit of pacing about as he talked.

Although Aristotle ascribed a god-like nobility of character to Plato, little is really known of his personality. His writings hint (to me at least) at a voluble, opinionated, didactic individual—imaginative and ascetic, full of charm, mystical intuitions, and headlong enthusiasm for world-reforming schemes. But whether he was actually like that we cannot be at all sure. Like many Classical Greeks he seems to have been mainly homosexual in his personal affections, though in addition to his lovers male he is said to have had a mistress and to have left a son behind him.

Now what was he writing? Not the story, which we know; but what kind of composition? A transcription of a real discussion, fiction, drama, or

what?

For one thing, *Timaios* and *Kritias* are certainly not stenographic records of real conversations among Socrates and his friends, since the fictitious date of these dialogues is two-thirds of a century earlier when Plato was a child of about six and could neither have taken notes on them when they occurred nor have remembered them when he was old enough to write them out. They probably do not even record real speeches heard later in the Socratic circle, for in his young manhood Plato had more interest in his poetry and in a political career than in the philosophy of his middle-aged friend Socrates.

For that matter, there is no reason to regard any of Plato's dialogues as a stenographic record. Most of them, like *Timaios* and *Kritias*, are laid at too early a date for Plato to have heard them with understanding, and Plato sometimes juxtaposes people who in real life could not, for chronological reasons, have known one another.

It seems that the naïve modern reader is sometimes deceived as to the nature of the philosophical dialogue because this is now a rare form of literary expression. However, it was extremely common from Classical times down to recent centuries, for it let the author present several sides of controversial questions in a lively form without committing himself to any. Of the thousands of such dialogues written, none pretends to be an accurate transcript of a real discussion.

Furthermore putting imaginary speeches into the mouths of historical characters was also an accepted practice in Plato's day—even the conscientious Thucydides did it—and has not disappeared even yet. Writing such speeches was long a standard exercise in Classical schools of rhetoric, and in time some of these orations in the names of famous men came to pass as original and authentic works.

In fact, whatever Plato's virtues, literal accuracy was never one of them. He approved pious frauds, devoting a section of the *Republic* to a defense of the doctrine of the "noble lie" that rulers may tell their subjects to make them contented with their lot. He filled his dialogues with pseudo-myths like the story of Er the Pamphylian at the end of the *Republic* and imaginary speeches like that of Lysias in *Phaidros*, all of which, as far as we know, he made up himself. When he read one of his first dialogues, *Lysis*, in public, Socrates is said to have complained: "By Herakles, what a lot of lies this young man is telling about me! And the sophist Gorgias was equally astounded at the words Plato put into his mouth. We have long known that there is little connection between the speeches of Plato's "Socrates" and the real Socrates. While the former may express some of the latter's ideas, Plato's "Socrates" is essentially a ventriloquist's dummy, and we cannot tell where the opinions of the real Socrates leave off and those of Plato begin.

Plato's elaborate build-up—the tale of Solon and the Egyptian priest, Socrates's assurance that the Atlantis story is "no invented fable but genuine history," and the talk of Kritias's old manuscript—are common literary devices. Not only is the "old manuscript" a well-worn literary artifice, used by story-tellers from ancient Egypt down to Poe and Lovecraft, but also Plato is not even consistent in using it: in *Timaios* Kritias says he lay awake all night trying to remember the story, whereas in *Kritias* he asserts that he has the notes that Solon took on his Egyptian tour at home. If he had this material in written form, he should not have had to lose sleep trying to recall the tale.

As Babcock said: "the Atlantis tale must be treated either as mainly historical, with presumably some distortions and exaggerations, or as fiction necessarily based in some measure (like all else of its kind) on living or antiquated facts." All indications are that the latter is the true explanation; Plato even hinted that such was the case by Kritias's remark about considering the prehistoric Athenians as identical with the citizens of *The Republic*.

Moreover Plato was not (as Atlantists assume) the kind of person interested in accurately passing on oral traditions—an illiterate primitive supernaturalist—but a sophisticated urban literateur, as well qualified as any man of his time to write imaginative fiction. The unity and lifelikeness of the tale, sometimes cited as evidence of its truth, are

within the competence of any good story-teller—certainly one of Plato's powerful intellect.

It is absurd to object, as does the mystical Merezhkovski, that it is "incredible" that one of Plato's uprightness should have lied about so important a matter as the Atlantis story. No matter how much fiction he used, Plato did not think of himself as lying. Instead he meant to express those "higher truths" that philosophers play with but that have nothing to do with the facts of science and history. Why not? He composed fictional allegories all the time in his writings, and so did his contemporaries. It was the custom, as it was also among Jewish philosophers.

As for the "living or antiquated facts" used by Plato, we cannot wholly reject the possibility that he derived something from a tale brought back from Egypt by Solon; but neither can we rely upon it. Plato is the only authority for Solon's unfinished epic poem; nobody else (except those who comment on Plato) mentions it. While that does not prove it never existed, Classical writers were much given to identifying their sources, so that, considering Solon's eminence, other Greek writers would probably have quoted from or referred to his Atlantean epic if it ever circulated at all. Moreover Plato had no very accurate knowledge of Solon's Egyptian visit, since in his account of it he put the wrong king on the Egyptian throne.

Furthermore we do have a slight gleam of information about the actual

source of the *Timaios*: "Timon the Pyrrhonist (*circ.* B.C. 279) is the earliest authority for the statement that Plato founded the *Timaeus* upon a book which he bought. Later writers amplify the story: one asserts that Plato was himself a member of a Pythagorean brotherhood and was expelled; another tells us that the book was by Ocellus Lucanus; a third ascribes it to *Timaeus Locrus*; a fourth even goes so far as to mention the sum paid for it. The final version is given by Hermippus of Smyrna: it relates that the book was by Philolaus and was obtained through a kinsman of his. Hermippus does not say that it existed in his time; if it had, it would probably have been in the library of Alexandria, and we should have heard more of it."

E. K. Chambers, just quoted, goes on to say that a book purporting to be this very treatise by Philolaos, a leader of the Pythagoreans after Pythagoras, is quoted from by later writers, but Chambers considers this a late forgery. However that may be, while we need not take the elaborations of Hermippos and his colleagues seriously, the skeptical Timon wrote less than a century after Plato's death and may have known what he was talking about. Books were rare and expensive enough in those days to make the whereabouts of a single copy of interest to literary men.

Timon's mention of the *Timaios* without the *Kritias* suggests that the book in question dealt, not with Atlantis, but with the long philosophical

dissertation by "Timaios" on Pythagorean philosophy. Still and all, Plato undoubtedly owned other books.

With the facts in mind, the Atlantis story makes an interesting comparison with Coleridge's poem *Kubla Khan*:

In Xanadu did Kubla Khan
A stately pleasure-dome decree:
Where Alph, the sacred river, ran
Through caverns measureless to man
Down to a sunless sea.
So twice five miles of fertile ground
With walls and towers were girdled
around. . . .

This too is a vivid fragment describing luxurious surroundings and filled with a note of doom. As Lowes showed in his erudite *Road to Xanadu*, Coleridge got all his colorful images from old travel-books such as Purchas's *Pilgrimes* and *Pilgrimage*. And while analogy is a treacherous guide, perhaps Plato obtained his ideas from similar sources. Bramwell, comparing Coleridge with Plato, suggests that if more of the books in the Alexandrian library had survived the ravages of war and religiosity, we might today be able to trace down Plato's actual sources in like detail.

Assuming that Plato did *not* get his Atlantean concepts from a lost treatise on Pythagoreanism that furnished material for the rest of *Timaios*, where then did he acquire them? Here we should perhaps ask about the ideas held by educated

men of Plato's time concerning the world they lived in. Obviously Plato could not have used rumors of America as a source for Atlantis if no Greek had ever heard of the place.

Now, you cannot say off-hand that because an ancient author fails to mention something in his surviving works, he could have known nothing about it. Still, from the treatises of pseudo-Skylax, Strabo, and other Classical geographers, and from geographical references by other ancient writers, we can form a fair picture of the expansion of the knowledge of the Hellenes about the world beyond their rocky peninsula.

When any writer accurately describes an area, you may infer that he either has been there or has obtained his information from a reliable source. But if he makes flat misstatements about a place, as by saying that it is water when it is actually land, then that site is obviously beyond the bourne of the region of which he has sound knowledge. While he may or may not know about places he does not mention, *if* he knows a site he will probably know the main localities between there and his own home. Then, if he does not know a place, the chances are that neither will he know places on the far side of it from his home. "His home" we may in this case take to mean Athens and its surroundings, or more broadly Greece and the Aegean Sea.

Furthermore the age from Homer to Strabo was, in the Classical world, a time of more or less continuous advance in geographical knowledge.

(There may however have been some small recession after Homer's time as a result of the rise of Carthage.)

Therefore if one of Plato's predecessors knows a place, the chances are that Plato either knew it too or could have found out about it if he wished. Conversely if neither Plato nor Aristotle knows a place, it is unlikely that their predecessors like Solon and Herodotos would know it either. Remember that there is no *sharp* boundary to a man's geographical knowledge, and also that educated men may have differed in their geographical beliefs; still there was a good over-all consensus of geographical opinion in Athens at any one time.

With these principles to guide us, let us see how knowledge of the world expanded from Homer to Plato. Anybody who discusses Greek history, science, or art starts with Homer as a matter of course.

But who was Homer, anyway?

The answer is far from simple. In Classical times people took it for granted that the *Iliad* and *Odyssey* had been composed by a blind Ionian poet named *Homeros* who wandered about the Aegean singing lays to the tune of his lyre. His birth was ascribed to a dozen or more places, and dated anywhere from 1159 to 685 B.C. In Hellenistic and Roman times several biographies of Homer circulated, all probably written in the time of Aristotle or later in response to the demand for non-existent information, and based mainly on conjecture from the poems themselves and on sheer

romancing.

True, there was a small school of *chorizontes* or "separatists" like Xenon and Hellanikos, who asserted that the two poems were by two different authors: But they had little influence and were almost forgotten until quite modern times.

Then in 1795 Friedrich August Wolf of Halle and Berlin startled the academic world by proclaiming that "Homer" had been neither one man or two, but many. "Homer," he said, was a collective name adopted by or applied to a group of poets who composed a number of heroic lays not combined into the present *Iliad* and *Odyssey* until the time of Peisistratos, a dictator of Athens in the sixth century B.C.

This radical opinion led to a tremendous war of words among Greek scholars that has continued down to the present with no decision in sight. Some adhere to the one-Homer view; others the two-Homer or "separatist" opinion, though they divide the two poems variously between the authors, some for instance giving the *Catalogue of Ships* in the second book of the *Iliad* to one author and all the rest to the other. The Wolfians or multiple-Homer party (who to me seem to have the better of the argument) differ widely among themselves as to how and when the various parts of the poems were combined into their present form. And the arguments of the various groups of Homerists are contaminated with such rank subjectivism that an outsider can hardly pursue them with profit.

Gilbert Murray, the most eminent of the Wolfians, affirms that both poems were composed by a long line of poets, one of the more gifted of whom may have been named Homer. They are traditional books, dating back to days when there was no reading public and writing was confined to a few bards, each of whom had his own book: a long roll of papyrus on which poems were scratched without table of contents, chapter-headings, punctuation, or even divisions between words. Each bard added new matter when he could; he might for instance let a colleague copy one of his lays in return for the same favor. Otherwise he kept his manuscript as secret as he could. When in the midst of a recitation he announced he would have to consult the Muses, he ducked into the woods for a quick look at his book to refresh his memory. Although poems the length of the *Iliad* and *Odyssey* can be memorized by exceptional people, a written version is still a great convenience.

Furthermore the *Iliad* and *Odyssey* did not stand alone in early Greek literature. They formed part of the Trojan cycle of epics, which included half a dozen other poems like the *Sack of Ilion* and the *Homecomings*. In addition there were several other whole cycles such as the *Argonautika* and *Herakleia*. None except the *Iliad* and *Odyssey* has come down complete, and these probably survived the tooth of time by having been chosen for public recitation at the festival of the Panathenaia during the fifth century B.C. Many frag-

ments of the other epics, which are attributed some to Homer and some to other more or less legendary bards like Stasinos, have survived in quotations, and we are familiar with their plots from the many later Greek plays, poems, and mythological treatises based upon them.

Concerning the content of the *Iliad* and *Odyssey*, opinions varied in ancient times from extreme skepticism to an idolatrous reverence for Homer's wisdom and truthfulness. Strabo boiled with rage whenever some skeptic like Eratosthenes of Kyrenë cast doubt on Homer's accuracy by saying that after all poets are paid to please, not to teach. However, while some Homerists tend to take the poet as literally as they can, modern criticism generally supports Eratosthenes. The poems contain many plainly fictional elements, such as the intervention of gods in human affairs, and private conversations that could never have been recorded.

As for the "substratum of truth" that devout Homerists suppose to underlie the fictions of the poems, there may well be scraps of history buried in these works. However, judging from similar poems dealing with periods for which we do know the history, such as the Charlemagne cycle of romances, the historical content of the Homeric epics must be so slight and so muddled that we cannot filter it out at this late date.

Some of Homer's characters were no doubt based upon real people: thus Atreus king of the Achaeans, father of Menelaos and Agamemnon,

is probably the Atarissiyas king of the Akhiyawas mentioned in the Hittite royal archives dug up at Bogazköy in Turkey. Others again may be pure myths: Helen a fertility goddess, for example, since if she had experienced all the abductions attributed to her she would have been nearly ninety when Paris took her to Troy. The learned Murray thought that the fleet-footed Achilles among others might be a tribal god, or a personification of a tribe.

If we knew all the facts about the Homeric characters we might discover that most of the persons named in the poems combined (1) the name of a real person, (2) the deeds of some real persons and some folk-tale heroes, and (3) the attributes of real persons, fictional characters, and gods all rolled up together in varying proportions. The whole question of who Odysseus and his fellow-characters "really" were is so very obscure and disputed that we are lucky not to have to decide it once and for all in this book.

Now about the geography of Homer: The anti-Homer Classical writers like Kallimachos of Kyrenë tended to restrict Homer's knowledge to the eastern Mediterranean, while those of the pro-Homer party like Strabo and Plutarch affirmed that the poet had known the lands and seas all the way from the Atlantic to the Black Sea, and sought like Victor Bérard and others in modern times to identify all the places Odysseus visited in his travels with real places. Hence Homer's "Thrinakia" became

Trinacria, a name for Sicily, and the strait of Skylla and Charybdis was identified both with the Strait of Messina between Italy and Sicily and with the Strait of Gibraltar. Samuel Butler even wrote a book in which, after vigorously attacking the Wolfians, he set out to prove that the *Odyssey* was written by a woman: a young lady of Drepanum (modern Trapani) who put herself into the poem as Nausikaä; and that all the places mentioned in the work are Sicilian. Butler's highly subjective argument, however, converted few people except the late George Bernard Shaw.

Of course *if* we knew that Homer (regardless of whether he was a man or a corporation) accurately knew the geography of the Western Mediterranean, we might be compelled to find such a relationship between fact and fiction, if only for our own peace of mind. In fact, though, we know nothing of the kind.

Irrespective of authorship, the poems (dealing with events supposed to have happened in the twelfth or eleventh century B.C.) probably took somewhat their present form between 900 and 600 B.C. Although they did not finally jell until after Plato's time, their author(s) and editors seem to have taken pains not to introduce "modern" inventions and institutions that would spoil the archaic flavor. Hence the heroes always use weapons of bronze, though Homer himself mentions iron in figures of speech.

On the other hand the Greeks did not begin to send out colonies to

regions outside the Aegean until the eighth century B.C., and did not definitely penetrate the Western Mediterranean until the seventh and settle there permanently until the sixth. To be sure, Phoenicians and Cretans before them had navigated the western waters, but it does not follow that they had tried to impart their knowledge to the Greeks. If anything they tried to keep it secret. And even if a Greek bard picked up hints of western lands from some drunken Phoenician sailor, he still would not have possessed a clear picture of the region, especially since Greek cartography got started in earnest only when Anaximandros of Miletos attempted the first world map in the sixth century B.C.

In fact, Homer was not the least map-conscious; he even put the eastern Kimmerioi or Cimmerians in the West. He might well have heard rumors of Tartessos which he used in building his magical realm of Scheria; he may have transformed Madeira into Kalypso's isle of Ogygia; and perhaps tales of the eruption of Etna and Vesuvius became the bombardment of the ships of Odysseus with boulders by the Laistrygones. It has also been suggested with some plausibility that the skull of a fossil elephant (which seen from the front does look rather like that of a one-eyed human giant) became the Kyklops Polyphemos (who is also identified with a volcano) and that a large squid or octopus metamorphosed into the man-eating monster Skylla.

However, while for centuries Homerists have found the floating island of Aiolos in the Lipari Islands west of southern Italy, they ignored the fact that Odysseus, after leaving this island, sailed due east with the winds in a bag almost to his native Ithaka—to accomplish which he would have to sail right across southern Italy, mountains and all.

Judging from his use of names and description of places, then, Homer knew the Aegean Sea and its shores and islands from firm first-hand acquaintance. He had a fairly reliable second-hand knowledge of the west coast of Greece, where however he got the islands mixed up. That is not surprising; after all Apollonios of Rhodes in his *Argonautika* bungled the geography of that region just as badly, though he lived long after Plato and had plenty of information available.

Homer also knows of the nomadic Scythians and Thracians north of Greece, whom he calls by such descriptive names as *hippemolgoi*, "mare-milkers." To the east, although he has heard of the Mysians, of the interior of Anatolia, his knowledge, seems not to reach as far as the Hittite and Assyrian Empires, unless perchance the Keteioi mentioned in the *Odyssey* (XI, l. 521) be the Khatti or Hittites. Southward he has heard of Sidon of the Phoenicians, of Egypt, and of the dark Aithiopes or Ethiopians ("burnt-faces") beyond Egypt. His Kikones of Thrace and his Lotus-eaters of the Libyan coast are probably real people, and the se-

ductive fruit eaten by the latter is probably the jujube, still relished in those parts.

To the west he has heard vaguely of the tribes of southern Italy and Sicily, the Sikeloi and Sikanioi, but they are mere names to him. Hence when Odysseus leaves the land of the Lotophagoi he sails off into Fairyland, finding islands like Aiaia and Ogygia and monsters like Polyphemos wherever it suits the story-teller to put them. Finally, Homer has no true picture of the Atlantic Ocean, since for him the world is still surrounded by a great river, the "flowing river Ocean." When the Atlantic later became familiar to the Greeks they called it the "Ocean" because it was located where they had previously pictured this mythical river. Nobody ever explained why such a circular stream, holding its tail in its mouth like the serpent Ouroboros of occult symbolism, should flow round and round as they evidently thought it did.

Hesiod, another half-legendary poet of the eighth century B.C., heard of the Tyrrhenians or ~~Strus-~~Strusians of Italy, but otherwise knew little more about distant places than Homer. However he described more imaginary regions like Erytheia and the Hesperides in the West, Hyperborea in the North, and the lands of the dog-headed men and gold-guarding griffins in Asia, all of which jostled real countries and peoples for places on the map for the next two thousand years.

By the sixth century, the age of

Solon the statesman and Hekataios the first Greek historian, the Black and Caspian Seas were known, though opinions differed as to whether the latter was merely a bay of the encircling Ocean Stream. The large western islands—Sicily, Sardinia, and Corsica—were pretty well located, though the Balearics, whose men wore coats of grease in lieu of clothes and hired out as mercenary slingers, remained unknown for some time yet. The Strait of Gibraltar was known, and Tartessos beyond it, but beyond that—nothing.

Rumor had it that the Phoenicians sailed out through that strait to a group of islands, the Kassiterides, whence they returned with tin, but nobody knew which direction these islands lay in. The Tin Islands became such a fixture in the minds of Classical geographers that even after the real source of tin, Cornwall and the Scilly Isles, became known, the Kassiterides continued to lead a ghostly separate existence in the watery wilderness of the Atlantic.

The next century, that of Herodotos and Socrates, saw further advances in knowledge. Herodotos knew that the Ocean was more than a river, though he failed to learn, despite inquiry, whether it extended around to the north of Europe as the mythical Ocean River had been thought to do. He was sure, however, that it stretched around Africa to join the other great sea, the Erythraean or Arabian. No Greek is known to have explored the northern coasts of Europe until Pytheas,



THE WORLD ACCORDING TO HEKATAIOS, or as conceived by educated Greeks between the time of Solon and that of Plato. (After Bunbury.)

who came after Plato's time. The poet Pindar in this period described the Pillars of Herakles as "the furthest limit of voyaging." "All beyond that bourne cannot be approached," and "Beyond Gadeira toward the gloom we must not pass."

Plato was born two or three years

before Herodotos died in 425 B.C. In his time geographic knowledge was still expanding; one of his contemporaries, Damastes, made the first Greek mention of Rome. Another contemporary wrote a *periplous* or navigational guide under the name of Skylax of Karyanda, who many years before had been hired by Darius I

of Persia to explore the Indus River to the ocean. Pseudo-Skylax mentioned places beyond the Pillars—Gadeira, Tartessos, Kernē—but in a muddled fashion that showed he got his information from Carthaginian sources, and either garbled it in the process or was deliberately misled by his informants. He mentions "much mud, and high tides, and open seas" in the Atlantic.

Thus, when Plato looked to the West, all was clear as far as Sicily. Beyond that, in Carthaginian-ruled regions, he saw as through a glass darkly. Aside from the Pillars of Herakles and the ocean beyond them he had merely some names and casual descriptions to go by; nothing one could draw a map from. Hence even if the shoals marking the site of Atlantis existed, Plato would probably have had no clear knowledge of them. All the more he could not have known of Britain, or Scandinavia, or the Americas and used them as the basis for Atlantis.

The same is true *a fortiori* of Solon, who had flourished two centuries previously. In Solon's day there was a vague sense that the Inner Sea narrowed to the Far West before opening out again into the Ocean River, but of details of that region the Greek mind was as bare as an egg is of hair. Solon could hardly have imagined the Atlantic Ocean as it really is, with or without bobbing continents.

Could he however have picked up such ideas in Egypt? As far as the evidence goes the Egyptians knew

less than the Greeks of the world beyond their borders. To them the world was shaped like the inside of a shoe-box, the floor consisting mainly of Egypt with the Nile running lengthwise down it. Around Egypt lay a meager border of seas and deserts, inhabited by barbarous tribes of no interest to the sons of the gods except when they got above themselves and invaded Egypt. No, the Egyptians were the last people on earth to consult on geography.

From Homer to Solon the Greek picture of the world comprised the more or less circular land-mass of Europe with its appendages of Asia and Africa, surrounded by the Ocean Stream, and beyond that remarkable river the all-surrounding Outer Continent. Between Solon and Plato, partly as a result of Greek expansion and partly from tales picked up from the ubiquitous Phoenicians, educated Greeks acquired a more realistic picture of the Atlantic. Herodotos first mentioned the Atlantic Ocean by its present name, though not for several centuries did this term altogether displaced such terms as "Great Sea," "Outer Sea," and "Western Ocean."

This process of rectification was not yet complete in Plato's time. The old Ocean Stream had simply been widened until it was large enough to accommodate Plato's Atlantic continent between Europe and the outer or "true" continent, which not only Plato but later writers like Theopompus and Plutarch retained even after the geographers had discarded it. The old Ocean River of Homer and He-

siod was not wide enough for Atlantis. The idea of an Atlantic continent can hardly be older than the knowledge of an ocean to hold it; and since the knowledge of this ocean only began to penetrate Greek minds about the time of Herodotos, it is hard to see how the Atlantis concept can be older than about 500 B.C. at the earliest.

The legendary lands associated with Ocean River evolved parallel to it. In Homer, Hesiod, and Pindar all is exquisitely vague, though these places, it is implied, are either lands on the banks of the river or islands small enough to fit into it. Odysseus goes from Kirkē's island "to deep-flowing Okeanos, the outer bound of the earth, where lie the land and city of the Kimmerioi, veiled in fog and cloud." Here Odysseus summons up the ghosts of his friends by necromancy, and the shade of Achilles mournfully remarks that he "had rather be a poor man's serf than king over all the dead."

There too lie "the islands of the blessed along the shore of deep swirling Ocean," where dwell the "happy heroes for whom the grain-giving earth bears honey-sweet fruit flourishing thrice a year," "where the ocean-breezes blow . . . and flowers of gold are blazing," where Kronos rules, and fair-haired Rhadamanthos, the virtuous brother of Minos, judges the shades of the dead. In Greek theology, a soul that had worked out its karma by sufficiently virtuous lives was given a last incarnation as a statesman or sage and then turned

out to grass on the Isles of the Blest. These concepts need not, however, have been based upon any real knowledge of western geography, since many people like the Samoans place the land of the dead in the Far West, perhaps because of a subconsciously felt analogy between a setting sun and a dying man.

When the Greeks borrowed the Herakles myth-cycle from the Phoenicians, they took with it additional details for their picture of Atlantic geography: the Pillars of Herakles, Tartessos, Gades, and the island of Erytheia where Geryon kept his kine. As accounts of far-western lands percolated back to Greece, the Greeks naturally identified these lands with the mythical isles of their poets; hence the name "Fortunate Isles" for the Canaries. Some of the first accounts to reach Greece were far from the facts. It was said, for instance, that the sea-going Semites had found a great island with not only the delightful climate and lush fertility that myth had attributed to the Isles of the Blest, but navigable rivers as well. The Carthaginians liked it so well that they planned to seek refuge there in case of defeat in war, and cut the throats of any whom they suspected of meaning to go there without permission. /

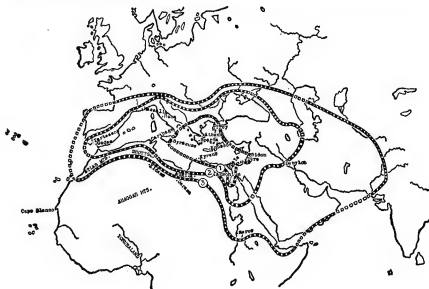
The real Atlantic islands, the Canaries, Madeiras, and Azores, answer the description as to woods and climate, but none is big enough for navigable rivers. Whether some account of Britain, or a section of the Atlantic coast of the mainland, got

mixed up with a report on Madeira we do not know. Two writers after Plato tell the story: a member of Aristotle's school who wrote under the master's name, and Diodoros of Sicily. The first also told of a region of islands and weed-covered shallows swarming with tuna, which sounds like the West African coast near Cape Blanco and the Gulf of Arguin. No doubt the tale of the island had circulated in Greece before it was written up in its present form—perhaps as early as Plato—and might therefore have suggested Atlantis. Himilco's story of a vast weed-covered shoal, perhaps based upon the mud-flats of the Guadalquivir and perhaps

on the West African coast explored by Hanno, reached Greece about the same time, and was adopted by pseudo-Skylax, Plato, Aristotle, and the pseudo-Aristotle who wrote of the delectable island.

The encircling Outer Continent went through a similar development, though it never merged with the facts in Classical times because the Americas, which corresponded to it more or less, lay beyond the reach of Classical explorers. Originally beginning at the far bank of Ocean Stream, it was gradually pushed farther away as voyages into the Atlantic failed to find it, until it dissolved entirely, though one can detect faint ghostly

THE GROWTH OF GREEK GEOGRAPHICAL KNOWLEDGE — approximate limits of accurate knowledge possessed by Greeks of the world in the times of (1) Homer, (2) Solon, and (3) Plato.



traces of it in the Terra Australis of later times.

The Outer Continent seems to have been associated with the satyrs, those snub-nosed, horse-tailed supernaturals whose implacable lust is indicated by a baldly physical manifestation in Greek vase-paintings. Their patriarch was the drunken Silenos, a son of the Arcadian goat-god Pan and a nymph. King Midas of Lydia was supposed to have once caught Silenos by getting him drunk (a feat later transferred to the Neopythagorean mage Apollonios of Tyana) and kept him to hear him tell of the Outer Continent.

In later Greek times the satyrs were confused with Pan and given goat-legs in place of their original form. Pausanias, telling of a stone seat in Athens whereon Silenos was said to have sat, recounts that Euphemus the Carian told of having been blown on a voyage into the Outer Sea, where the ship made a landfall on some islands called Satyrides from the satyrs who lived there. The latter swarmed aboard and began raping the women without more ado, until the sailors pushed off, leaving one unlucky lady as an offering to their concupiscence.

So, you see, Greek geography expanded by the same process as that of the knowledge of any people during an age of exploration. A sedentary primitive tribe normally knows little about the country a few miles beyond its own territory. As far as it is concerned, its own land is surrounded by a belt of the unknown, and beyond that nobody knows—per-

haps one comes to where the world-island ends or the sky-bowl comes down to meet the land.

The myth-makers of the tribe people the surrounding belt of *terra incognita* with the characters from their myths and legends: gods, monsters, the land of the dead, and so on. As knowledge increases the tribe hears tales, often distorted, about the real nature of this belt, and combines with these tales the existing myths to make a new mythos of monsters and supermen. Then as civilization arises and travel familiarizes the folk with the unknown lands, they realize that it does not contain the creatures they thought it did. However, since the monsters, giants, and the like have now become part of the nation's sacred literature, they must exist somewhere. Therefore they are pushed out farther into the new belt of unknown land surrounding the former one, and this process is repeated over and over. "Geographers," said Plutarch, "crowd into the edges of their maps parts of the world which they do not know about, adding notes in the margin to the effect that beyond this lies nothing but sandy deserts full of wild beasts, unapproachable bogs, Scythian ice, or a frozen sea."

Thus, Atlas was originally at home in Greece (a cave on the west coast of the Peloponnesos was pointed out as the setting of a myth about his seven daughters) and so, perhaps, were the Gorgons and the satyrs. When increasing knowledge expelled these lively figments from Greece,

the whole lot were dumped in Africa, which made a congenial home for them since the Greeks knew only the fringe of the northern coast. The Berber tribes who controlled the interior, people notoriously disinclined to take any nonsense from strangers, told tall tales of dog-headed men and the like to the south, which stories the Greeks duly added to their stock of African legends.

Herodotos therefore described North Africa thus: As one went west from Upper Egypt one first came to the Oasis of Ammon (now the Oasis of Siwah). Thence one proceeded to Augila (modern Aujila) and thence to Garama (modern Jerma) the capital of the Garamantes, a Berber tribe whose country was later called Phazania (modern Fezzan). Farther yet one reached Mount Atlas, so tall that clouds always concealed its top, and around which lived the Atlantes who got their name from the mountain, ate no living creature, and never dreamed.

Maybe there really was a tribe in those parts whose name reminded some Greek of the word "Atlas" and thus helped fix the name to the region. Or perhaps the locus of Atlas and his associated myths gradually moved west, like the Welsh Indians, as the country became known, until it could go no farther:

Close to the shore of the ocean, not far from the region of sunset,
Farthest of all is the Aethiop land,
where Atlas the mighty
Turns on his shoulder the firmament
studded with bright constella-

tions . . .

Hence Plato, to relocate Atlas further west, had to invent a continent in the ocean for him.

Later writers added to the picture: Diodoros told of the Atlantioi (presumably the same as the Atlantes of Herodotos), the Gorgons, and Queen Myrina of the African Amazons. Pliny the Elder and the Spanish-Roman geographer Pomponius Mela in the first century A.D. furnished dramatic details about the dreadful dwellers in the Saharan waste: the Troglodytes lived in holes in the ground (as the Matmata of Tunisia still do), ate snakes, and had no language but bat-like squeaks; the Garamantes had no institution of marriage; the Aegipani ("Goat-Pans") were half goat; the Gamphasantes went naked; the Himantopodes ("Strapfoots") had snakes for legs like the Titans whence Atlas sprang; finally the Blemmyae were headless men with faces in their chests. And at night Mount Atlas resounded with the raucous revels of satyrs. Similar tales were told of the remoter tribes of India, which also was credited with satyrs, snake-footed men, and the mouthless Astomi who subsisted by smelling flowers.

To confuse matters further Pliny described the Fortunate Isles, alluded to Plato's sunken Atlantis, and in addition spoke of an existing island named "Atlantis" off the Moroccan coast opposite Mount Atlas.

A series of military expeditions under the Roman Empire into the African interior finally cleared up these African mysteries. The first un-

der Cornelius Balba in 20 B.C. captured Kidamē and Garama, and in the second century A.D. Generals Septimus Flaccus and Julius Maternus penetrated south from Phazania to the Sudan. Needless to say they met no Strapfoots or Goat-Pans. However all this was long after Plato.

Thus Plato could evidently have acquired his geographical ideas, such as large islands in the Atlantic and impassible shoals that might be the remains of such islands, from beliefs current among his contemporaries. The same applies to his geological ideas of submergence of land by earthquakes, which the Mediterranean peoples were familiar with on a small scale. Severe quakes had shaken Greece in 426 and 373 B.C., and the former had already, in Plato's time, been described by Thucydides in language that strongly suggests the Atlantis story:

"At about the same time, while the earthquakes prevailed, the sea at Orobai in Euboia receded from what was then the shoreline, and then coming on in a great wave overran a portion of the city. . . . In the neighborhood also of the island of Atalantē, which lies off the coast of Opuntian Locris, there was a similar inundation, which carried away a part of the Athenian fort there, and wrecked one of two ships which had been drawn up on the shore."

Now, if any passage in pre-Platonic literature, still extant, gave Plato his idea for the sinking of Atlantis, this is it. While we don't know for sure that Plato read Thucydides's his-

tory, the chances are that he did. His pupil Aristotle certainly did, as is shown by some of his remarks in his *Constitution of Athens*. Did Plato expand little Atalantē into great Atlantis? When we learn from Strabo that in consequence of this tremblor Atalantē "had been rent asunder" and "got a ship-canal through the rent" it certainly looks that way.

Plato's knowledge of history was of the same order as his knowledge of geography. Though an intelligent man who could handle abstract ideas with great adroitness, he had after all only limited materials to work on. Authentic Greek history starts between 700 and 650 B.C. with the institution of the archons or regents in Athens. Before that time we have only lists of dubiously real kings like Lykourgos in Sparta and Kodros in Athens, and the alleged dates of the founding of colonies. And this history becomes detailed only about 600 B.C. in Solon's time.

There is of course the voluminous literature of the Greek Heroic Age, headed by the Homeric poems and filled out with the narratives of the Siege of Thebes, the Labors of Herakles, and the Quest of the Golden Fleece, together with minor stories like those about Atalanta of Kalydon. All these events are supposed to have happened within a few generations between 1250 and 1100 B.C., after which the Heroic Age peters out, leaving Greek history an almost complete blank for more than four centuries. Judging by comparable bodies of literature, such as the sagas of the

Germanic Heroic Age at the time of the Fall of Rome, the actual history embalmed in traditions of the Greek Heroic Age must be small.

Therefore Plato could not have secured an accurate history of Atlantis or of the prehistoric Athenian Empire, even had they existed, through Greek historical channels because these channels did not run back more than three centuries before his own time, let alone 9000 years. Accurate history, in fact, depends upon writing, which the Greeks had acquired only in the ninth or eighth century B.C. A preliterate people has no history in our sense of the term, but a body of myths, timeless and fantastic, which might embody an occasional fact like an insect in amber but which are practically useless for reconstructing the past of the tribe. The folk may also have the orally transmitted memory of striking events and outstanding personalities going back perhaps several centuries but not much farther.

When a folk learns to write, certain people fascinated by history try to find out and record what happened from the Creation to their own time. These tyronic historians assume that the myths and the memories of real events are the same sort of thing; myths, they suppose, describe the real events that happened just before the start of mundane history. Therefore they try to splice the two together by guesses and interpolations. Classical historians, trying to make a coherent tale out of their invincibly inconsistent mass of myths in order

to complete their concept of world history, were driven to conceiving several Helens and several Zeuses. For example Cicero, one of these rationalizers, solemnly assures us that "The third Apollo is the son of the third Jupiter and Latona," and the scholiast on the *Timaios* tells of three Deluges.

Greek pseudo-history started with the Creation: "In the beginning Ouranos (Sky) ruled the universe. By intercourse with Ge (Earth) he begat first those called the hundred-hand — Briareos, Gyes, Kottos — unsurpassed in size and strength, each having 100 hands and fifty heads. Then Earth bore him Kyklopes. . . ."

After more begettings Ouranos's son Kronos became God, under whom occurred the Golden Age described by Hesiod, the time when everybody was happy and good. The idea of progress, remember, is essentially modern; to Greeks as to other pre-scientific peoples perfection was to be sought in the past. The Golden Age ended when Kronos was dethroned by his son Zeus, the greatest begetter of all. Plato's Atlantis belongs to the following Bronze Age, closed by Deukalion's Flood, which Plato says followed the Atlantean earthquake. Then when the descendants of Deukalion and other survivors had repopled the earth came the Heroic Age of Herakles and Theseus, of the Argosy and the Theban and Trojan Wars.

The same process of synthesis can be seen in Hebrew literature, where

authentic history starts about the time of Samuel and King Saul, since only then did the Hebrews begin keeping written records. Everything earlier—Adam and Noah, Abraham and Moses—is more or less fictional, and furthermore the fictions are of the most diverse origin, some like the Flood being modified Euphratean myths picked up during the Babylonish Captivity.

If Plato could not have gotten Atlantis from Greek historical sources, might it have come down via Egypt as Plato said it did? If less enterprising geographically than the Greeks, the Egyptians had a good historical sense and had kept records ever since the early dynasties. When Herodotos visited the country they told him that "Min was the first king of Egypt," and gave details of the reigns of several of the 330 kings who had ruled since. Some of the things they told him were true and some not: they identified the pyramid-builders of the Fourth Dynasty more or less correctly but placed them 2000 years too late.

Under the Ptolemies, Manetho, a priest of the Delta, wrote a history of his people in Greek. The original has perished, more's the pity, but later writers have preserved extracts. As one might expect, Manetho started with dynasties of gods and demigods who ruled Egypt after the Creation. Then: "In succession to the Spirits of the Dead, the Demigods, the first royal house numbered eight kings, the first of whom, Menes of This, reigned 62 years. He was car-

ried off by a hippopotamus and perished." This Min or Menes was historical in the sense that he represents a merger of several kings who struggled over many years to extend their sway over the entire kingdom: Ka-Ap, Narmer, and Aha-Mena, to name the most prominent.

Egypt therefore really did have history, however bare and inaccurate, that went back 3000 years before Plato. But although that is a long time, it will not take us back to Atlantis by another 6000 years.

Furthermore Egyptian history, as you go backward, stops short with the First Dynasty. Manetho said that before that the gods ruled, but the real reason is that before that time the Egyptians had not kept written records—were in fact just emerging from neolithic primitivism. Most that we know of the histories of Egypt and Iraq before 3000 B.C. we have learned, not from records of the kind available to Plato, but from modern archeology. And, in general, the Greeks made no archeological investigations.

It seems, then, that even if Atlantis had existed when Plato said it did, he could hardly have learned about it because he lacked the necessary historical and geographical knowledge. Therefore he must have used the beliefs of his own time: the earthquake from one of the real tremors that had shaken Greece, perhaps Thucydides's account of the quake of 426 B.C., in the sixth year of the Peloponesian War. The idea of lands' rising out of or sinking into the sea

was familiar to educated Greeks, and so were the fictional mud-banks of the Atlantic Ocean. While Plato could just possibly have obtained elements of his story from an account handed down by Solon about his Egyptian tour, this could hardly have been Plato's main source, since important elements of his story like the existence of the Atlantic were not current in the Eastern Mediterranean until well after Solon's time.

Finally, rumor had it that the Phoenicians had found one or more large islands with big rivers in the Atlantic. What more natural than to combine these concepts into a large Atlantic island sunk by an earthquake, leaving impassable shoals behind? Plato no doubt ended by thinking that he had not only composed an attractive story but had also, incidentally, hit upon the true explanation of the great mud-skerries. (Plutarch explained the suppositious shoals differently: as sediments deposited by the rivers of the Outer Continent.) It was not Plato's fault that these banks did not exist, and that large islands and continents do not behave that way, as scientific geology was 2000 years in the future. Neither would Plato have known that one great storm could not erode Greece from a lush peninsula to its present gaunt form, or that earthquakes don't swallow whole armies in their cracks.

Once we have impaled Plato's main concept upon the pin of reason, the other elements of his history fall into

place as well.

For instance he could have procured the general idea of the defeat of barbarian invaders by the brave Athenians either from the Persian Wars, or from the Graeco-Carthaginian wars in Sicily, or from both, combined with the legend of the invasion from the Outer Continent which Theopompus repeated in another form. The Kleito romance was doubtless derived from the general stock of myths about liaisons between gods like Poseidon and mortals like Halia, Kleito's hot-and-cold water system from Greek beliefs about the Alpheios and other rivers they wrongly supposed to flow underground, and the time and place of Atlantis both from stories of the real Tartessos and from the standard myths of the Western Paradise (Elysion, Garden of the Hesperides) and the Golden and Bronze Ages.

Plato could have derived the city plan of Atlantis either from Babylon, changing the square plan of the latter (as described by Herodotos) to a circle, or from Carthage with its circular walls, or both. The metallic decorations of the Atlantean citadel are probably either from Homer's palace of Alkinoös or from travellers' tales of Tartessos. He could have obtained the inspiration for the harbor-works of Atlantis from Syracuse, the New York of the Greek world, and of Atlantean sea-power from legends of the sea-kings of Crete.

The theory of periodical catastrophes expounded by Plato's Egyptian priest is probably of Babylonian ori-

gin. Lastly, the religious ceremony could have come from the Orphic mystery-religion, with which Plato was probably familiar because he got many of his ideas from the Pythagorean school of philosophy and Pythagoras had been strongly influenced by Orphism.

The most reasonable way to regard Plato's story, then, is as an impressive if abortive attempt at a political, historical, and scientific romance — a pioneer science-fiction story—based upon materials of Pla-

to's own times, and possibly also upon traditions of Crete and/or Tartessos, which has been kept alive partly by its literary merit, partly by Plato's philosophical reputation, and partly by its nostalgic emotional appeal. It fitted perfectly into the views of world geography, geology, and history current in Plato's Athens, even though it does not at all fit into our own ideas on these subjects. That is no reason for not enjoying it as a good story—we enjoy *Alice in Wonderland*, though it isn't history.

FOR YOUR READING PLEASURE

in the

August Issue of OTHER WORLDS

THE CALIBRATED PEOPLE, by William T. Powers. "*Does — does it feel any different to be Calibrated?*" Jon asked. Ten years old, a class B Citizen, Jon Becket was of age, on his own, and starting the most important phase of his life — he was entering basic training to become one of the select, *Calibrated* people.

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Also:

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Stories by Walt Sheldon, Rog Phillips, R. J. McGregor, and
Jan Tournau

On Sale at Newsstands July 3rd

Want a baby-sitter who won't raid the ice box, run up the phone bill or have the gang in for a party? Call Sitter Service for Robot xx343.

PUNISHMENT FIT THE CRIME

By Lyn Venable

"CLEMM, will you fasten these pearls for me," asked Nona Noldis, "I seem to be all thumbs."

Her husband switched off his electric shaver and took the necklace from her, fastening it about her slim throat. He playfully pinched the back of her neck.

"Not still worried about leaving Bobo tonight are you? Marianne told you that she has been using Sitter Service for months and everything has worked out fine. Still if you'd rather not go to the party I can call the Briggs' and tell them we can't make it."

Nona smiled as she pushed a few strands of hair into place. "No dear, we haven't been to a real party since Bobo was born, and I know how much this means to you businesswise. It's just that Bobo is still such a baby. The idea of leaving him with a . . ."

The doorbell chimed. Just once.

"That must be the sitter," exclaimed Clemm, "I'll go." From the bedroom Nona heard the door open and then a clanking. The clanking

drew nearer and in a moment Clemm came in with the sitter.

"Oh Clemm," moaned Nona, "we can't, we just simply can't!"

"Hush," admonished her husband, "you don't want to hurt its feelings, do you?"

There was a whirring, and a metal hand produced a printed card from somewhere inside a metal body. The card said, "I am Robot xx343. Please refer to me by this serial number if you wish to make any comment on the quality of my services. I respond to oral commands. Please supply me with the following information: What food is to be administered to the child? What medication, if any? Where may you be reached in case of emergency? My distress signal should I have to call you will be a siren-like wail. Should you phone me to check, my signal that all's well will be a radar-like blip-blip. If any person is to be permitted to enter the premises during your absence, please describe him or her to me in detail. I trust my services will be satisfactory. Thank you."

P.S. My meter will start registering



as you leave. It will register 20 credits per hour. You will be billed on the first of the next lunar cycle by Sitter Service."

Nona and Clemm looked at each other. The latter assumed more assurance than he actually felt. "Well, there, you see? Everything's provided for. Now tell it what it's supposed to know, we're late already."

"Are you sure it'll understand?"
"Sure I'm . . . well let's test it. Er—you, go fetch the baby's formula from the refrigerator, heat it to the proper temperature and bring it to me." The robot turned slowly and clanked away, unerringly to the kitchen. There were metallic sounds. Shortly it returned with the bottle in its hand.

Nona reached out to take the bot-

tle, then drew back her hand, then extended it again. The robot gave her the bottle. She sprinkled a few drops of the fluid on her bare forearm.

"Just right, just exactly right. But Clemm, suppose Bobo doesn't like him. Suppose he's afraid of him?"

"We'll see about that. Come on xx343." The robot lumbered after them into the baby's room. They switched on the light. The cherubic face of year-old Bobo stared out at them from between the bars of his crib, like a tiny prisoner.

"Bobo," began Nona uncertainly, "this is someone who is going to stay with you for a while while Daddy and I go to the party." The baby smiled a bubbly smile and reached out for his bottle.

"See, he doesn't know the difference. Now tell it those things and let's go. The Briggs' are probably waiting dinner."

"All right. Let's see. Now, he won't need another bottle, but give him a teaspoonful of syrup if he starts coughing. That bottle on the bedside table. We're not expecting anyone . . . no, don't let anyone in. You can reach us at YO-77754. And if you don't mind tidying up the kitchen a bit I'd . . ."

There was a sudden whirring and relays clicked somewhere inside xx343. Another printed card appeared. "I am a baby sitting robot. I am capable only of performing those acts having a direct bearing on the care and welfare of my charge. These instructions are built into my memory banks and cannot be altered. I am

sorry. Thank you."

Nona tossed her head, "Well, Mr. Robot, I guess you got me told."

"Honey," began Clemm patiently, "it's a well known principle of robotics that a robot can perform only such acts as it has been preconditioned to perform. All these impulses must be stored in its memory banks, and on a small portable model like this one, naturally, the capacity of the memory banks is limited. But don't worry, it can do everything it has to do for Bobo. Now for Pete's sake, let's go." He led her, still uncertain, toward the door.

Bobo slept. xx343 sat stiff and immobile in a chair. Every hour a relay clicked, and xx343 got up, checked the child's pulse, respiration and temperature and went back to his chair. A thin, thin tongue of smoke, almost invisible, curled probingly under the door. The smoke was sucked into xx343's atmosphere sampler. Warning shot through every coil into the robot's brain.

FIRE! click . . . click-click. Call fire department; parents of child and Sitter Service office in that order, click-click.

The robot shot to his feet. Seconds later the phone was in his hand. He dialed. First the fire department. (The phone was dead.)

The smoke curled under the door in thick grey ropes. In its room, the baby began to cough and cry.

The robot dialed the number Nona had left with him. (The phone was dead.) In the hall, someone screamed a long drawn-out scream. xx343 dialed

Sitter Service. (The phone was dead.) There were running feet in the hall. There was shouting and more, much more screaming. The child gasped and cried fitfully in the other room.

The robot began the whole monotonous process over again. Dialing numbers into an instrument that was dead, lifeless, useless. The phone was out of order . . . somewhere a wire . . . burned through . . . fused . . . broken . . . the phone was . . . OUT OF ORDER.

The robot let the instrument drop to the floor. He walked to the door and opened it. The hall was a blazing inferno. A woman ran past him, her long hair flaming behind her like the tail of some dreadful comet. He saw the elevator shaft, acting as a chimney, drawing the fierce heat upwards. The stairwell collapsed with a crashing crescendo as he stood there.

Click-click-click. No phone . . . no elevator . . . no stairs. Atmosphere becoming too contaminated for survival of subject . . . degrees Fahrenheit over 100. Danger point. Circumstances point to extreme physical danger to subject. Click?????

There was nothing there . . . nothing. Something jumped a circuit . . . got its wires crossed . . . went haywire. Something happened to xx343.

Quietly, slowly, he closed the door. He went into the child's room and looked down at it. Then he went to the window and looked down, down at the street below. He opened the window.

THE people in the street outside of the Sitter Service offices had ugly faces. Ugly as all faces are ugly when contorted by anger, hate and a thinly disguised readiness for violence. The face of The Mob.

Clemm scarcely heard their muttered comments as he shouldered his way through the outer fringes of the seething crowd.

"Like I always said, them big machines walkin' around loose like that, never know what they're liable to do. A coupla them wires gets crossed or somethin' an' then what? Like this case about the kid in the fire . . ."

"I say wreck the lot of 'em. This should prove it."

"Decent folks should stay home evenings anyway, instead of galivantin' off and leavin' their kids with a hunk of tin."

"But the act was essentially good."

"But the act was not part of its emergency action bank. It was not part of any of its banks. The robot *thought*. We can't have 500 pounds of nearly indestructible metal going around *thinking*."

Clemm was at the inner hub of the crowd now. A burley figure blocked his path. "Where do you think you're goin', Mister? You wouldn't be wanting to give any business to this place would you? Not after what happened?"

Clemm, with a gesture almost of desperation, tried to push past the obstructor. The man became menacing.

"We say nobody goes in here Mister."

Clemm's face blanched with anger. "Get out of my way you fool, I'm Clemm Noldis!"

The crowd fell back, almost shrank back as though he had said he were a leper. An awed murmur went through it, the man who had been blocking his way stepped aside, giving him one last surly glance from under lowered brows.

Once inside the door, the big glass door with Sitter Service stencilled in gold on it, he paused to light a cigarette with trembling hands before proceeding to the reception desk.

The girl's face was pale and she looked at him without welcome. Perhaps she was thinking of the ugly mob outside and what happens to people who try to do their jobs when an organized gang says "Don't Work."

"I'd like to see Mr. Versinger, please," asked Clemm quietly.

"Mr. Versinger isn't seeing anyone today," she answered without looking at him.

For the second time that day he answered, "I'm Clemm Noldis."

‡ J. H. Versinger sat behind his desk and toyed with a scale model of his robot. He turned the tiny figure over in his hands almost lovingly as he spoke. "I've been afraid, for a long, long time, Mr. Noldis, that something like this would happen. We hired the finest robotics men in the country, they checked and rechecked every circuit after each robot came in from a job. Whatever happened to xx343 is . . . beyond them. They simply don't know. The worst part of it

is, he's still thinking, and he doesn't realize . . . he can't understand what he's done wrong.

Clemm slowly withdrew his checkbook from his pocket. "Mr. Versinger, I'm not a wealthy man but I'll pay every cent I can raise if you will sell me that robot."

The other man's eyes met his in a long moment of understanding and sympathy. "I know how you feel, but public sentiment is too strong against it. They've tried to close me up a dozen times in the past. A dozen times. Petitions, strikes, court orders, zoning, everything they could think of. People don't like them you know. Afraid of them. And now this has gotten out. No, Mr. Noldis, xx343 has got to be dismantled—executed is a better word. Completely and permanently.

"But, we're finished anyway." There was only one letter on the shining surface of the mahogany desk. He held it out to Clemm. The latter read it slowly, moving his lips a little, mouthing the unfamiliar words.

"What—what does it mean?"

"It means that I must cease and desist from any furtherance of my business. It means a government man will be here in the morning to decide what is to be done with my work, my money and with me. It means, Mr. Noldis, precisely the end."

"No! Murdered because he saved my child's life?"

Versinger laughed bitterly. "If he had let the child smother or burn to death in the fire it would have been

the same. But then, it would have been justified, his death and probably mine too, because if such a thing had even happened I-I'd have killed myself. But no, xx343, having exhausted every emergency instruction to no avail, made up some of his

own. He carefully tore the bedclothing into strong strips, made a sling and lowered your little Bobo safely to the ground. *He thought for himself.* This, in a robot, is unforgivable."

THE END



Editorial

(Continued from page 1)

he says is quite aggravated, for he employs quite descriptive words in referring to present-day writers: he says they are charlatans, out-and-out fakers who try to cash in on the public's ignorance of science, perverted science-peddlers, and so on.

Recognizing the evil ways upon which science fiction has fallen in the past twenty-five years, Mr. Gernsback, apparently stimulated by the magnificent turnout at the convention, and by the earnestness of the delegates, decided to bring science fiction back from the way of the transgressor and into the true path of the realm of the possible. He has (as we write this) published his second (April) issue of *Science-Fiction Plus*. It is in this issue that he makes plain his case for true natural phenomena as a basis for science fiction rather than what he terms pure fantasy or fairy tales.

What does this pseudo-science, this fantasy, consist of? We aren't left in doubt, because Mr. Gernsback

goes into detail, enumerating several examples. I'll mention them for your benefit, if you haven't read his magazine yourself, and because they are important.

The modern science-charlatan, says Mr. Gernsback, usually takes a current scientific development, such as radio, radar or electronics and "discovers" that a well-known array of electrical or radio apparatus, or components, if hooked up in a special "secret" manner — presto, will cure every disease from Abscesses to Zoophobia—not to forget cancer! Usually the wire circuits connecting the various components, instruments and meters make no sense whatsoever to a qualified technician.

To illustrate, Mr. Gernsback mentions Dr. Albert Abrams' (A.M., L.L.D., M.D.) *sphygmobiometer*, which was a diagnostic instrument which tuned in on every imaginable disease, every point on the instrument's meter-scale indicating a different disease. He goes on to mention Dinshah P. Ghadiali, who made

a fortune using colored lights to cure almost every known disease, incorporated in a device called the *spectrochrome*.

But to get closer to modern science fiction, he refers to L. Ron Hubbard's ludicrous book, *Dianetics* (the words are not mine), a hodge-podge of pseudo-medical pseudo science. By means of a device known as an *electropsychometer*, Mr. Gernsback says, Hubbard will cure you in no time of cancer or ingrown toenails—provided you will buy his new book at \$5.00.

Going still further, Mr. Gernsback lumps into his definition of pseudo-science fiction such things as spiritualism, astrology, cults, health fads and quasi-medicines such as blackstrap molasses, chlorophyll, cold cures, aphrodisiacs and other nostrums.

May the son disagree with the father!

Perhaps I shouldn't say disagree. I agree with Mr. Gernsback that all these things do not belong in science fiction. What I ask, however, is where in science fiction do these conditions exist? I won't speak for my brother editors, although I feel they will repeat after me, but speaking specifically of OTHER WORLDS, *not once* has any such pseudo-science appeared in any story in its entire history! In short, Mr. Gernsback is crying wolf when there is no wolf! Rather, in flat contradiction, I say that today's science fiction is **SOLIDLY** based on reality, and can by no stretch of the imagination be said to be pure fantasy (although there is much pure

fantasy, labeled as such, being printed in what is popularly termed the "field").

Perhaps it would be proper for me to answer Mr. Gernsback first by stating my own definition of science fiction. As Mr. Gernsback points out: Science (according to the dictionary) is ordered and systematized knowledge of natural phenomena gained by observation, experimentation and induction. Fiction is imaginative prose literature. To amplify, science is knowledge, as of facts. Fiction is feigned, invented, imagined. Thus, science fiction is feigned, invented, imagined facts. And in order to feign, invent, imagine, we begin by projecting our minds from the basis of a fact toward a fiction along a logical sequence of reasoning. When we have arrived, we do NOT have a fact, but a fiction, produced by *induction*. In short, we have employed the method given by Mr. Gernsback in his definition of science, which is *not* given in *my* dictionary—induction. Induction is purely and simply, the *fiction* part of science fiction. And it is logical and perfectly acceptable in the best circles. It is nothing more than philosophy, which is the father of science.

Mr. Gernsback himself began more than 27 years ago by saying "what man can imagine, he can do." He adopted that as one of the by-word phrases to describe his new type of fiction. He also said: today's fiction, tomorrow's fact.

Science fiction is philosophy, as specifically directed toward the future

physical and mechanical advance of mankind. There is another branch of philosophy which deals with the *spiritual* side of mankind, which Mr. Gernsback briefly mentions as "spiritualism, disguised as religion." In passing, spiritualism is religion. But let that go. It has nothing to do with science fiction, nor have any of the other definitions mentioned by Mr. Gernsback. I can only say that the reason Mr. Gernsback mentioned them is because he has been out of touch with science fiction for many years, and because he was somehow misinformed.

Mr. Gernsback speaks of "true natural phenomena, existing now, or likely to exist in the future." I think he means *known* now, or likely to be *known* in the future. If I'm wrong in thinking that, then I must only class his statement as meaningless. The factor of "time" (now or future) has nothing to do with the truth of a phenomenon. I might ask, is a phenomenon science knows nothing about, untrue? Is it nonexistent because we have not yet discovered it? Is it "impossible" to assume that colored lights might actually possess curative powers? Or, is it possible that science *has* already done some experimental work along these lines and discovered that color does possess curative powers? I think, without looking, but trusting my memory, there is much therapeutic work done, especially in mental institutions, using color as a basis for at least relief and relaxation if not curative measures.

My point is this: just *how much* science (knowledge, as of facts) already exists which our writers are still treating as fiction because they are way behind in their science reading, or the publishers are way behind in their science publishing? And also, just how much already established (meaning accepted) fact is being challenged by modern investigators, and will shortly be relegated to the realm of fiction where it belonged in the first place?

When Mr. Gernsback started *Amazing Stories* I was one of his initial readers. And he started the magazine because he had discovered, through publication of some of his own stories, and some of Abe Merritt's (which were certainly not extrapolated science, but sheer fantasy, fairy tales) that there was a definite market for such fiction. He published it primarily to entertain. He had no mission, such as he says science fiction has. It was just incidental that science fiction, through its science content, was also proving to be educational and informative and stimulating of interest in science itself. Thus, at this late date, to ascribe to science fiction the mission to inform (he says a large percentage of science fiction readers deliberately choose science fiction because they want to be informed, not misinformed), is rather surprising, and hardly based on a realistic viewpoint.

But let's take Mr. Gernsback's own example of a pseudo-science factor in a story—that of the atomic explosion being heard on Earth from

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the Moon. If this is the extrapolation, then the factual basis is quite reasonable: sound travels on air waves. Is it so misleading and misinformative to extrapolate a means of hearing such an explosion in spite of the intervening vacuum? Is not radio just such an extrapolation? Can't we devise a reasonable and sensible means of transmitting that sound in spite of the barrier science has laid down to prevent? Of course we can. For all we know, sound *does* travel through a vacuum, in some manner we don't realize today. All that is needed is a method to detect that traveling. If our writers invent, feign or imagine a gadget to detect that sound, is that such heresy?

I agree with Mr. Gernsback that the science part of a science fiction story should be true or possible. But at the same time I feel, after reading Mr. Gernsback's first two issues, that he has needlessly limited his scope of inventiveness, his imaginativeness because of his rather unequivocal definition of a fact. The rejection slip used by OTHER WORLDS carries a list of reasons for rejecting a manuscript, and in returning it, we enclose one of these slips with one or more of these reasons checked. Among the reasons are these: Too factual; overworked plot; not sufficiently developed; outdated. In short, OTHER WORLDS, like all the other magazines in the field (save one) is science fiction, adhering to the time-honored tradition of science fiction to present a highly entertaining imaginative invention which stems from a scientific

fact, and which carries in its structure a reasonable extrapolation of that fact in future time.

I would have been forced to check one or more of these reasons for rejecting on the slip returned with all of the material in Mr. Gernsback's magazine. The argument that I might have been wrong from a sensible financial viewpoint (granting that Mr. Gernsback's magazine will be a financial success) has nothing to do with the correctness of my reason for rejecting. I will grant that Mr. Gernsback, for all his outdated viewpoints on what is or is not a science fiction story, is a very fine publisher. He is not out-dated there. He has presented a very handsome magazine, and one that commands the respect and envy of all his rival publishers. He uses color, fine slick paper, large size, layout, dramatic illustrations (very fine illustrations, those!) to the best advantage. It is a highly pleasing magazine, and extremely interesting. But it is predominantly a factual magazine, with, to me, an unsatisfying amount of extrapolation. In blunt terms, it is "old stuff" to a reader of science fiction who read Gernsback's magazines from the very beginning. In fact, in the feature article, the prime point of the article is that very much of the material in it was first conceived by Mr. Gernsback in 1917! Certainly science has advanced since that day!

Will the new magazine succeed? Will it outdo *OTHER WORLDS*? I feel that it must. Mr. Gernsback has a world of experience. He is the

father of science fiction. It was his genius that started it all, and developed it to the stature of an adult member of literature and entertainment. The fact that he has been out of touch with the field (he told us that at the convention) doesn't mean that he won't catch up swiftly. I am not criticizing Mr. Gernsback or his magazine—far from it! But as the son of science fiction, and *almost as old* as Mr. Gernsback himself, I cannot constrain myself from denying that science fiction today is degenerate, pseudo, patent-medicine, charlatan, fake! We are not perverted science-peddlers!

It seems that the older generation is always of the opinion that the younger has gone to the dogs. And it seems that the younger generation always thinks the older is passé. Obviously neither is correct. And in passing, let's go on record that we've all been rather startled by Mr. Gernsback's return to the field, and prodded into sudden activity. We intend to step on the gas and prove that the new model is right in line with the old one in the matter of get up and go.

With all dutiful honor and respect to you, Dad, I've got this to say: You'll have to put the ball across the plate where I can get more than a piece of it—you can't expect the umpire to call me out on foul balls!

And honestly, Dad, you wouldn't want any of us to stand meekly with our bats on our shoulders and let you breeze one past us just because you're the Old Man?—Rap.



LT. J. BOSSICOE, of 5303 Freemont Street, Jacksonville, Florida, says the Man From Tomorrow is a liar. Here is his letter:
Dear Mr. Palmer:

As a preamble to this declaration against you and your type of man, let me state my background so that those who read this may know something about me as well.

To begin with I am of age, male, and as much an adult as my experience can make me. I have been a continuous reader of Science Fiction since 1943. I have completed two years of college under a course of Mechanical Engineering. I am now a Navy pilot presently flying jets.

I have watched the slow development of your editorial policies. It has been with some concern that I saw the positive conviction that other races (non-human) are inhabitants of the earth. Your concern over the "Shaver Mystery" and the drive with which your editorials have preached the proposition has changed from the "It might be true" to "Now it can be told."

As many of your readers have undoubtedly done, I have waited for

you to take a positive stand on any of your generalized statements.

In the February 1953 issue of Other Worlds in that section of the magazine you call "The Man From Tomorrow," you make the necessary positive statement. Ray Carmichael, 508 Woodland, Houston 9, Texas, wrote a letter in which he asked for some definite information about the other beings (non-human). Your reply contained this statement and I quote:

"The discovery of these intelligent beings has already been made. They have both been seen and heard. They have been heard by radar and seen by radar, and they have been seen by pilots who go on up above 50,000 to 80,000 feet in the most recent of test jets. We will even go so far as to say that no pilot who goes above 50,000 feet can AVOID seeing them."

I am not in a position to say how high or how often I have been above the lower limit that you give, but I have been there and often. I even took some pictures from above the lower limit. The pictures are not enclosed because they reveal something

about the type of aircraft used.

Let me make this plain to your readers. A normal person at 50,000 feet and above can look for a long, long time and not see any "beings." This is true when looking for them and certainly proves the point that a person can AVOID seeing them.

What motivates your mind, causing you to accept as fact and offer such outright statements, is a matter for you and the expensive couch to find out. Don't let this letter hurt your ego though. Pick a new unsubstantiated theory and one with which more generalities may be used.

I realize that you desire to make a mark on this world but I am afraid your methods will only cause you to be associated with the famous two percent.

Then let us, the readers, contradict as we can with facts the fantasy passed on as truth by the editors of this magazine.

Thanks very much, Lt. Bossicoe. Your letter does a great deal to confirm the Man From Tomorrow in my own mind! You have given me the corroborating information I was waiting for. So, I will repeat what I said before. Intelligent beings have been seen above 50,000 feet, increasingly as added height is attained. No pilot can avoid seeing them *if he knows what he is looking for*. They have been noted by radar, and have been seen by jet pilots.

May I suggest what to look for? Look for pale yellow, red, orange, green and black objects, *many of*

them transparent, with definitely defined shapes, but *do not* look for "beings," i.e. animalistic shapes, but rather for geometric shapes. It is true that people only see what they are looking for, and also things that are capable of being linked with *past* observations. At first you will class these observations as tricks of the eyes, effects of the tremendous altitude, oxygen shortage or surplus, acceleration, reflections, atmospheric phenomena, and just plain imagination.

I wonder what you were taking pictures of? At 50,000 feet in a jet, there is little to photograph, except perhaps the plane itself, atmospheric turbulence at wings (which can become visible), or other jets.

Lastly, you've been nowhere near 80,000 feet. I doubt if you've ever exceeded 55,000 feet.

I have printed your letter. I cannot (as yet) print the letters of other pilots who HAVE been up there, and who HAVE seen the "beings." These other pilots are also readers. They do NOT contradict me. In fact, they wondered how I *knew*.

Now, Lt. Bossicoe, let me ask YOU a few pertinent questions! 1. WHY have you watched the slow development of my editorial policy in regard to the "drive" toward the conviction that other races (non-human) are inhabitants of the Earth? 2. Why do you "declare" against me and my type of man? Why take a "stand" on it? If you mean that 2 percent business, is it that important? 3. Why have you waited for a "positive" stand (not statement!) to write your

letter? Was it *necessary* to prove me a liar, and you foresaw that necessity? You've been above 50,000 feet, maybe you know!

Let me point out now that you can't read! First, in November, I said: "These beings will not be our *species*, but will be intelligent." I did NOT say they would be non-human. In February I said: "They are not human beings, i.e., they are not shaped like us. But they have a *very human* intelligence."

All right, Lt. Bossicoe, here it is! The beings ARE human. But without our physical *shape*. I have given you some hint as to their appearance. Now go up and look again. If your training in recognition is of high order, you WILL see them.

Here's another letter:

Dear Mr. Palmer:

I just finished your Man From Tomorrow in the February 1953 issue of OTHER WORLDS. There are a few comments I would like to make.

First: You should get Ray Carmichael to do the column from now on. His predictions will certainly be more accurate than yours.

There aren't any "human" type beings in the upper atmosphere. If there were, it would have leaked out through at least some pilots by now.

Second: I believe there will definitely be a World War Three. I will also predict it will happen between 1953 and 1957. It will not last too long— being mostly a "push button war." There will be much destruction, though.

Third: Space-travel will not come before 1960 (unless flying saucers change that). There is no man-made "Earth" rocket on the moon as you claimed at one time.

A report released by FLYING SAUCERS INTERNATIONAL has been in some controversy. Many of the statements were documented (which is more than I can say for your predictions). I sent to OW's sister mag, FATE, a report on its documentation. If it sees print, you will have something you can bite your teeth into.

I personally believe that the Government will soon say flying saucers are real; the saucers are interplanetary; they have a base on the moon; and that there will be some startling developments in late 1953.

I would like your opinions on the above statements. Do you agree?

Max B. Miller

*P.O. Box 34, Preuss Station
Los Angeles 35, California*

There aren't any undersea cities in the ocean deeps. If there were, it would have leaked out through at least some submarine men by now. Compare this statement with your third paragraph, and you may get the point. However, it HAS leaked out through at least some pilots. I'm not in a position to prove it, for the simple reason that it would mean trouble for the pilots. Remember what happened to Gorman when he "shot off his mouth" at Sioux Falls, South Dakota?

(Concluded on page 154)

LETTERS



CLARK PUBLISHING COMPANY, 806 DEMPSTER STREET, EVANSTON, ILLINOIS

Don Wilson

I was most pleasantly amazed to see the spread you gave my last letter. And since it obviously made such an impression on you (mention in the editorial yet! Gawd!) I think I'll make like an answer to it.

Funny. I think the years have had their effects on you, Rap. Or maybe, as you say, the truth of the matter is that you're no longer being frosted by those walnut-paneled offices at Ziff-Davis. Whatever the reason, the differences between this current exchange between us, and the previous one (back in 1947, I think), are nothing short of . . . ah . . . startling. But I *am* pleased to have got such an excellent and worthy answer out of you.

Before getting to that, though, the answer to your query in answer to your other correspondent is that if the president-elect should die between election day and the day the electoral college votes (which, I think, is 15 Dec.), the College could then make any choice they chose for the Presidency. Which, of course, they can anyway. Chances are they'd choose the vice-president elect, of course, but they wouldn't have to. If the president-elect died between *that* day and inauguration, it would automatically devolve on the v-p elect. If he too

should die, it would go to the next in line . . . the speaker of the house. I don't know offhand whether it would be the incumbent speaker (outgoing, I mean) or the speaker-to-be in the new House.

And you never answered MY query: why isn't that rag of yours copyrighted? Don't you crave protection?

Well, your reply to me revolves around two points you think I have missed: the fact that authors are made, not born, and the fact that what you're doing is developing new talent, not serving your friends. It's on this basis I'll answer your points; I could go behind them, but that would involve personalities, and it wouldn't get to the point of the whole matter as it affects me, anyhow. Being a reader, my first concern in any debate such as this is science-fiction, not personalities.

Your claim that I would be "surprised" to hear that authors aren't born is rather strange, made to one who's been following Campbell's magazines for years. As you might realize if you'd stop to think a minute, Campbell has been developing new authors since he first took over aSF six months before you took over

AS. His new developments were seen as soon as he'd run through Tremaine's backlog. He was NOT content to stick by the standbys, Ray Cummings, Gallun, etc. He went out and dug up some new ones. He's been doing it ever since.

His main difference from you, Rap, is in the approach to the problem. While you look for new talent in the unlikeliest possible places (which undoubtedly reflects some analogy you make with yourself, which is the unlikeliest place of all, hahaha) Campbell has a definite system. Besides latching onto the unknowns who come his way by chance and ring the bell right off (like Heinlein did, with "Lifeline," back in 1939) he keeps combing his readership for talent—with a constant flow of editorials encouraging readers to send in such stories as they may have written. His discoveries over the years have grown into the body of America's most excellent s-f authors, from Heinlein himself to Walter M. Miller, Jr., and Chad Oliver. Always, Campbell looks for two things: (1) strong ideas well expressed, (2) sound characterization, plotting, and such. And like any intelligent editor, he keeps his authors constantly encouraged to try new things. His own editorials are the germ for stories from authors who have the imagination to use them. Likewise, the science articles he publishes are for the avowed purpose of stimulating authors' ideas.

As final proof that Campbell does not utilize "born" authors, witness the fact that Asimov himself—per-

haps the most consistently excellent producer of them all over the years—was rejected twelve times before he made the grade.

Ask H. L. Gold, or even Bill Hamling, how *they* go about encouraging new authors. Not by buying their products sight unseen (and thus contributing to the folklore that "an editor is a man who buys manuscripts by the pound"). They do it by making authors rewrite parts of stories. They do it by working *with* new writers they think promising, helping them along, directing them in the use of the vast body of technique which is available in the production of good fiction. Gold has done that with F. L. Wallace. Hamling's doing it with Daniel Galouye; he did it with Geoff St. Reynard. He'd have done it with S. J. Byrne or Rog Phillips. If a story's not good enough to click, but shows that if its author were guided properly he *would* click, these editors give the man the guidance. They don't do him the disfavor of buying and printing his trash. If the time comes when he's well-known *then* he can cash in on his old dogs to new mags or cruddy mags just on the strength of his name—so even if you have monetary charity in mind, there's no excuse for buying junk.

It's all the more reprehensible, Rap, when you're the guy responsible for MISguiding a writer—like you did Byrne, encouraging him to write those Shaveristic stories when instead you could have had him using his very real talent for real science-fiction (which is like van Vogt's, with

the difference that Byrne's characters aren't quite as wooden as Van's).

But naturally, I think developing new writers is a fine thing. I suppose Byrne will be your best discovery in the end. Who *have* you developed over the years, anyway, besides Phillips, Byrne, and Shaver? Wilcox . . . Vern (*there* was a writer! Remember "Empire of Jegga?") . . . Livingston . . . O'Brien . . . McGivern . . . Geier (another excellent one whom I was sorry indeed to see retire into Shaveristic seclusion), . . . Yerxa . . . Browne . . . Hamling . . . and, to be sure, Patton, Irwin, Steber, Benson, Dexter, (the Dexter of "The Gamin" not "Palace of Darkness," that is!) etc.

Oh, I forgot Hauser, who finally clicked with "The Brain" after the failure of his earlier stories.

I don't think it's a very impressive list, myself, compared with the Campbell line-up.

And I think the reason's fairly obvious why it's not. It is simply because the orientation toward good science-fiction has always been directed by Campbell. No good writer would ever cut his teeth on *Amazing*, except it might happen by a fluke, because they'd all prefer Campbell's mag . . . being, most often, mature, educated scientists who found aSF the only magazine in the business where science was respected. (Rarely, to be sure, an actual professional author like van Vogt appeared amongst 'em.) And AMAZING, and OW after it, always mixed the few stories of the calibre of "Disciples of Destiny," "Empire of Jegga," Mur-

der in Space," "Hidden City," "Earth Stealers," etc., in among a raft of junk bought by the pound—PLANET STORIES stuff, and in the latter days, "Poor Rosicrucian's Home Companion" stuff.

And you're *still* braying against science. Lord.

Far as Shaver is concerned, that's just a difference of fundamental philosophy between us, I guess. I don't see ANYTHING there. You claim you see a beautiful imagination. To me, a few beautiful goddesses are a most poor substitute for action, plotting, description, characterization, and thought. As I suspected, I found "Beyond the Barrier" beyond toleration. I *have* enjoyed a Shaver story or two . . . "The Tale of the Red Dwarf," "Gods of Venus" . . . but for the most part, until he learns that you have to depict action and that merely saying things happened isn't enough, I'd reject him from PLANET STORIES. Even if he could spell. Hell, Campbell always had to rewrite *Hubbard* because of pee-poor grammar, spelling, etc.—but that was WORTH the extra work!

Incidentally, I hadn't meant to include Phillips in the same class as Shaver at all. I mentioned him because of the comment on "Children" that I preferred the old Rog to your "new" Rog. And as was obvious from my praise of his two recent novelets, I found Byrne mis-classed too.

And I think you're fully aware that your policy was not at all obvious when you were editing *Amazing*—either the Planet-like *Amazing* of

the early days, or the Shaver *Amazing*.

Incidentally again, I too cut my teeth on AS while in grammar school and early high school—till the Shaver Mystery drove me elsewhere in disgust and led me to learn to appreciate ASF. I've always held it against Shaver that he ruined the mag for me then. Of course I was misled too, by the quality of Vern's and Bloch's contributions. I assumed them the norm. Ha.

Finally, your policy is very encouraging to me, if I ever finish the novel that Howard Miller and I have been working on for 5 years. Since you buy manuscripts by the pound, I'll have it chiseled on stone.

I've been quite pleased by the past three issues of OW, by the way. Keep them coming. Hope you will consider that we're friends, too, because that's the way I feel about it.

833 Ocean Ave.,
Santa Monica, Calif.

First, thanks for the reply on our presidential question.

Next, the answer to your copyright question: A magazine is copyrighted in its entirety, not each individual item in it. All through the years, as a writer, and as an editor, and now as a publisher, we have been aware of a strange and very unjust paradox in the copyright business. We'll try to explain it lucidly, if it CAN be so explained. Let us say that first, it is ILLEGAL to copyright a thing already copyrighted. Or better, it is IMPOSSIBLE. But I have watched

publishers copyright thusly every month for years. How? Well, because many times items already have been copyrighted by the author, or by another publisher. What is copyrighting for? It is to protect the author against having his brainchild printed by somebody else without paying him; and he protects himself for 26 years, and can renew the protection for another 26. At the end of that time his literary work becomes public property—in the public domain. Many publishers watch these expiration dates, and then leap into action to reprint good works with the advantage of not having to lay out any money and thus make profit easier—but that isn't the point of my objection, so we'll skip the copyright-chaser type of publisher. What we want to concentrate on is the ridiculous situation, and the DANGEROUS situation, for the writer. He writes a story, sells FIRST NORTH AMERICAN SERIAL RIGHTS to a magazine. What he is selling is the RIGHT TO PRINT IT ONCE. But the magazine copyrights its issue in which the story appears. In short, NOBODY, even the AUTHOR, can reproduce a single word of it without the permission of the COPYRIGHT OWNER. Well, next thing that happens is the author sells books rights. He has to write the magazine publisher for permission to do this. FOR HIS OWN PROPERTY! But what if the copyright owner has gone out of business, and cannot be found? The book sale is lost UNLESS THE AUTHOR WANTS TO INFRINGE ON A COPYRIGHT,

for which the owner can sue hell out of him. Oh yes, magazine publishers are GLAD to release the copyright. They "always" do. Which at the least means a complicated filling out of forms, etc., and letter-writing, and AGAIN, the letter of the law is broken. The copyright is released to the author, and lo and behold, what does he receive? The RIGHT TO REPRODUCE the work of the OTHER EIGHT AUTHORS who happened to be printed in the same issue! It's all ONE COPYRIGHT. Now, can a magazine publisher owner of a copyright refuse to let the author sell other rights? You are quite right, he can. He can be a real RAT. If he WANTS to. After all, he OWNS that story, lock, stock and barrel, for 52 years.

Our point is this: If the author wants to protect his story, HE is the one who should do it. If the publisher of a magazine gets a blanket copyright on a magazine containing a dozen author's works, it doesn't mean a thing, really. MOST of the authors don't even realize their RIGHTS have been usurped. Further, when a publisher buys ONLY First North American Serial Rights, he CANNOT reproduce the work which he has copyrighted, HIMSELF! How ridiculous can you get? The copyright owner can't copy his own property! And the author of the piece can't either, without permission. And ACTUALLY, LEGALLY, the publisher CAN copy the work, ANYWAY HE PLEASES, be it Book, Movie, TV, or what have you, because he OWNS

the copyright, and the mere fact that the author has been paid only for that initial magazine serial right, means nothing. The author can't kick a hole in a paper bag over still further usurpation of the rights he has given up, LEGALLY.

Don, we want this copyright thing placed on a LEGAL basis. We do not intend to bilk any writer, and when we copyright a thing we don't own, without permission, we call it a flagrant usurpation of an author's rights—and we wouldn't play such a dirty trick on any of our writers, because they are all friends of ours. That's why we are bringing this matter up for discussion. Personally, as a writer who has LOST hundreds of thousands of words of his own work through just such a piratical copyright, we think the procedure ought to be corrected. But, until it is, we'll join the rest of the crowd. OW is now being copyrighted—just check the contents page.

Regarding Mr. Campbell and how he discovers new writers, what are you saying that we didn't? You are describing his tactics, exactly what we did when we first became editor of *Amazing*. Neither were we satisfied with the backlog. But we had to use it up. You know, funny thing, Bea Mahaffey is faced with the same problem! She has had to use up some of the stories I bought! And she's now searching for new talent and working hard to develop it. No, I don't look for it in the unlikely places. Just what is a "likely" place, Don? Would it be the mailbag? The

lobby to your office? The street outside? An engineering concern; the gas works; a steel mill; a furniture store; a school for writers? Or does Campbell have a source labeled "writers to be?" Don, I don't understand why I look in unlikely places, and Campbell looks in likely places. Oh, yes, you say they come to him by "chance." To echo you, hahaha. As for all those other things he does, I have done the same, and a FEW MORE. My few more are the strange things. Yes, I've even gone to the "caves." I've listened for "voices." I never overlook a bet! As for the number of discoveries Campbell has made, compared to my discoveries, I won't argue. But you did mention at least one of his discoveries from whom I produced his VERY FIRST story. But I am not asking for credit. Let posterity feel that he was Campbell's discovery. Actually Campbell was first to be an editor, and thus first to buy his stories. If the tables had been turned . . . Chance, Don. As for Asimov being rejected twelve times before he made the grade, I was rejected ONE HUNDRED TIMES before I sold my second story. Hahaha. Yes, I know how Bill Hamling worked with Galouye. Nice work, Don. I'm right proud of Bill. As for Byrne, I'm going to ask him to reply to you in this column regarding my MISmanagement in encouraging him to write Shaveristic stuff. Maybe buying his stuff was encouragement, but actually it was "riding the trend."

S. J. Byrne will be the greatest of them all before he's through. I saw

that BEFORE I saw his first manuscript! I saw it in the MAN. You'd do well to get to know Stu very well — there's a lot in that mind any human being could use! Maybe someday you'll call it Byrneiana. I hope not. Dave Vern? What do you mean, there WAS a writer. Take last month's OW, Don. I'm sure you've read it! There IS a writer. And if I may be so proud, MY discovery. But Don, I didn't develop a thing in him. He HAD it. Got it in many strange ways. I only recognized it, and had the incredible patience to put up with him in getting it out of him. Why, I have unfinished manuscripts by him that make me shed tears every time I look at them. Ask him when he's going to finish CIRCUS IN TIME, and MEKKO? Don, find out that answer for me. I WANT TO READ THE ENDINGS! I'll go nuts thinking of Eternity without an end to CIRCUS or MEKKO. Those are more than words to me, Don. They are almighty FRUSTRATIONS.

Don, you're awfully well versed in Palmer-history! Maybe you should know more. Hope we meet someday; I'd like to tell you more.

Vern cut his teeth on Amazing. Byrne cut his teeth on Amazing. HUNDREDS of others, all good, cut their teeth on Amazing. And some of the writers you name with awe are, in my opinion, just ordinary. Some are even miscast. They may be scientists, but not writers, and more, unimaginative. Sometimes there is such a thing as TOO MUCH direction. Who's BRAYING against science?

We are braying against DOGMATIC Ph.D's who make a sacred cow of science. I admit as much as you do, that the real scientist is the man who questions even his own research.

Don, WHY did the Shaver mystery drive you elsewhere in disgust? Didn't you see the imagination in his "alphabet," for instance? In his "exd"? In his "age poisons"? In his staggering analysis of mythology; the incredible linking up of the whole into a logical entity? Were you one of those who refused to permit him the liberty to believe in himself? Did you scream: "Don't call it true!" because you didn't want it to be true, because it mocked at the sacred cow?

Don, science fiction has always mocked at the sacred cow. It has indicted science for lack of imagination, and proved that what man can imagine, man can DO.

You've been pleased with the past three issues of OW? Don, so have we! Some of our writers are learning! They are beginning to see what it is that we want that YOU want. And by golly, we're going to pass it on to you as fast as we can wangle it out of them!

Sure we know you're a friend! We can see that "53R" behind your name on your subscription!—Rap.

Bobby Stewart

Howard Browne

FANTASTIC

336 Madison Avenue

New York 17, New York

Dear Mr. Browne:

It's too bad that you won't get to

see this letter, but Ray the Palmist has come up with another new idea. He wants all fan-mail that should be going to Ziff-Davis to head Evanstonway, so he can find out how to improve OW. I could tell him how: all he's got to do is stop printing such long novels, and instead have one short novel, 2 novelettes, 4 or 3 shorts, and the same features. Interior illustrations by Finlay, Emsh, Poulton, and covers by Emsh, Smith, Rogers, and Bonestell. Oh-yes, most important of all: make 3/5 of all the stories fantasy.

Right now let's see about the 5th issue of FANTASTIC:

I sure wish that I had issues 2 and 3 so I could compare this latest effort with all of the others (and I don't mean *Other Worlds* either!). I put ESCAPE ME NEVER and THE THIRD GUEST in first place, THREE WISHES and THE DELICATE DINOSAUR second, ROOT OF EVIL and STOP ON THE RED third, A STAR FALLS ON BROADWAY fourth, THE COLD GREEN EYE fifth, SOMETHING FOR THE WOMAN sixth, THE DEVIL GEORGE AND ROSIE and THE SWORD OF YUNG LO seventh, with THE TOURISTS in last place. I think TOURISTS was on your contents page merely to get a famous name like Rose in your magazine.

You seem to be getting a lot of authors to write fantasy for FANTASTIC even though they have never written fantasy before. Wish Rap was as good as you are in that

in persuading you to write a story for *Other Worlds*.

The cover was good, but continuing the front cover around to the back certainly makes a row of FANTASTICS look unattractive sitting on a shelf.

Interior illos: The Finlay of course was the best, with the Emsh illos for ESCAPE ME NEVER second best. Seems to me you could have 4 or 5 Finlays, with the rest of the mag Poulton and Emsh. You could do without Garo, Francis, Barth, Ashman and O'Sullivan (especially O'Sullivan).

Route 4, Box 8
Kirbyville, Texas

We want to thank all the FANTASTIC readers who directed their fan mail to us instead of to Browne. We learned a lot! We only print this letter as a sample of what we received.—Rap.

Val Walker

Just finished reading the lead novel of the March O.W. Had to drop you a line to tell you it was terrific. It was enough to bring me back to O.W. Honestly sometime there during the middle I lost out, just couldn't even stand to read the thing. At the time I was feelin kinda bad over it, because O.W. had been one of my favorite mags for about the first 10 numbers, then WHAM something happened to it. I hadn't even picked up a copy till a friend gave me the March issue. Welcome back to the fold, Ray.

The mag now reads like it did back in the days of Eric Frank Russell's "little monster" stories. One of the best stories I ever read appeared in one of your earlier issues, can't think of the name of it, about a Martian who was deaf and dumb but managed to help the earth people who were struggling after an atom bomb attack. The story was illustrated on the cover—showed a blue bem.

Item: About editorial, you should tell us your troubles. Try editing a fanzine.

John L. Magnus wrote a nice letter, get some more yarns by Eric Frank Russell.

Oh yes, one gripe: The Man From Tomorrow. This one was utterly ridiculous. What about all the people who have cousins in the country? Of course that's a small point—the main one is this: It would take the whole space outside the city to produce enough food for the huge met to run on. Also what about mines, raw material, fruits, no I'm afraid you're a little off the track this time Ray.

6438 E. 4th Pl.

Tulsa, Okla.

P.S.: Write for Whispering Space—sample copy free above address.

You should know what happened—Ray Palmer fell on his fanny and was out of circulation! But now he's back, and the issues are showing it.

So you don't like our predictions either? But don't you place too much emphasis on blood relationship? Even in the Bible it says "father against son, brother against brother, etc., etc.

... "But while we're talking about it, we'll make one more prediction—it will be found to be possible to change the future (as indicated by trends) by the simple process of making a flat prediction about it! Now, if you'll only believe that one, we can take credit for making it impossible for Truman to be president for a third term! We predicted flatly—he was afraid to run! Now Val . . . you used the word ridiculous already! Don't risk boring us!—Rap.

John Ruyle

I've been trying for about 1½ years (I started with the September, '51 issue) to stop buying *Other Worlds*. I liked few stories. The covers were mediocre and all the same. The illustrations were below par. But the atmosphere of OW kept me going. I tried to stop—and did stop, for a few weeks, several times—to throw off the magazine. But with the latest (March) issue I guess I've lost the fight.

Every new issue has something unusual. More news; a fine editorial; genuine editorial handling; honesty; and attraction. The covers are getting better and better. In fact, I don't see how you can improve them much, but you say you will, and that's enough for me. That's another thing: With the August '51 issue you promised to start rolling. Then you did. Since then you have done many things: change in layout, better covers, better stories (they still are nothing to brag about, though), better illustrations, unusual editorials, and a

much better magazine. What you've promised to do, you've done. And you're not finished yet.

Why do I buy *Other Worlds*? I guess mostly it's because of the editors. You, in your editorials, show your personality. It is the little things like this in a magazine that mean more to me than the stories. *Other Worlds* seems to me to be a live magazine: friendly and human. But what of Bea? The readers never hear from her, excepting second-hand. Why not add an extra feature giving her a chance to show herself (maybe replacing Man from Tomorrow, which, I think, has outlived its usefulness.)

Let's evaluate the March issue now.

The front cover is excellent; the back cover is superb. Please get more of HANNES BOK if you can. Some time ago you said that you had two Bok covers in the house. You've run them. The first Bok back cover was signed 1950. Has Bok done anything more for you since then? I've heard that he had left fantasy.

Another person who makes me love OW is J. Allen St. John. Don't ever lose him (or even misplace him) now. The new series will be fine. His drawing for this issue was excellent. I hope you will continue to use him, both on covers and on interiors.

Then there is Robt. G. Jones, who has been doing fine work. Please use only his best stuff in OW: when he's good, he's very good, but he can be very mediocre, too.

You say you have Cartier back. Any chance of a CARTIER BACK

COVER or two? It would help OW.

As for stories, there is room for much improvement. I haven't liked most of your stories to date, but the latest issue shows improvement (Gibson, Smith, de Camp). I would like to see the following: Bok, who writes wonderfully and also could be used to illustrate stories; Bloch, who's been missing for too long; Boucher; a little more Palmer wouldn't be amiss; good de Camp; Fred Brown; and a few others. And I would like more of St. John, Bok, Cartier, and Jones on covers; while it would be good if you could find Rogers and/or Timmins hiding somewhere. Looking back, I see I've asked for quite a bit, but seeing what you've done, I'm beginning to think you can do almost anything.

Also, could you please run more fantasy, and better s-f?

Last of all, I would like to thank you for making OW a better magazine. I appreciate your working with the readers and for them. OW has jumped from low on my magazine rating to third place (after aSF and F&SF), and I like to think it may someday rise to first. You have introduced beauty to the exterior of your magazine; now let's see more quality in the interior. If you do only a fraction of the things I have suggested, I, and I think all of your readers, will be more than satisfied.

121 Sunset Drive
Concord, Calif.

You've got something in your letter that appeals to me—give Bea a

bigger place in the magazine, let the readers see her! So, we've gently suggested she write some editorials, etc. Let's see what happens? Should be good—I know she has a lot of talent. But she's so darn modest! Not like me at all!

Yes, we have more Hannes Bok. Both covers and interiors. And St. John is busily at work on at least two more covers and on interiors. We'll also enlist Cartier for covers. Never fear, we will do as you ask! As for stories, what do you say now? And we guarantee that future issues will show even more improvement. As for fantasy, we hate to horn in on Bill Hamling's Imagination, but we do have a few very good fantasy yarns coming up whose authors obviously thought they were too good for Bill! Bill always loves it when we dig him in OW—we neglected to do it once, and he asked us what was the matter. He seemed hurt . . . Well, Bill, here you are again! You know, Bill puts so much realism into his magazine that we have a mortal fear that someday his Imagination will run away with him! We can see the headlines now: "Editor of Imagination becomes imaginary! Vanishes into thin air!" (Beg your pardon, John, but you don't mind us giving Bill his monthly plug right in the middle of your letter? We had breakfast at the Hamlings the other day, and we owe him something . . .)—Rap.

Marilyn Shrewsbury

Ah, miserable wretch that I am, I missed an issue of *Other Worlds*.

How do I know? I read the letters, and lo and behold, they all (or nearly so) have raves about "The Scarpein of Delta Sira." I scramble madly through my old issues, and nary a Scarpein do I find. Sack cloth and ashes be upon me.

But I *have* got the March ish, and while I haven't read anything yet but the letters and editorial and special features, I like it. If any of those Robert Gibson Jones illos that you went over your budget to get were the equal of the one on this ish's cover, you spent your money in the right place. And I don't even have to mention Hannes Bok's back cover illo, I love every thing he puts out.

I enjoyed E. E. Smith's biog, and got quite a kick out of his calling himself an amateur. More amateurs like him we should have, no?

Say, Ray ole glub, check me if I'm wrong, but in your editorial you state that you paid over 10c a word for Myshkin. Someplace else it says that said Myshkin is 65,000 words long. Getting out my trusty abacus (and taking off my shoes) I figure this to be worth in the neighborhood of \$6500.00. Nice neighborhood. Why, in the name of the thousand pen names of Kuttner, didn't somebody tell me about this gold mine? Why have I been wasting my time writing letters for nothing when I could be writing stories for *money*? The dawn has come, and I have seen the light.

Box 1296

Aransas Pass, Texas

Horrors, Marilyn, you mustn't

miss copies of OW! Why don't you subscribe? As for Myshkin, I paid that money out while editor of AMAZING STORIES. You don't think I'd spend so much of my own money, do you! Not unless about ten thousand of you readers subscribed and made the money available! Hint.

—Rap.

Alex Saunders

Subject: *Other Worlds* covers.

Some months ago, this pen-pusher was knocked for a loop when he gazed as though in a trance at OW's November, 1952 cover by Robert Gibson Jones. Unquestionably the most striking to grace your publication. I was caught, and held fast, by its utter alienness.

Upon snapping out of my spell, I wrote you a hasty letter. In it I suggested, threatened, begged that Jones be given a king-size orchid for his effort. Now, once again, I make the same plea. No, not exactly the same. This time, Rap, present that gifted painter with *one dozen* orchids. All king-size, y'hear?

Why the raves? One look at the current cover of OW—March, 1953—makes the reason obvious. That Jones could surpass the November cover I never thought possible. But he did, masterfully, superbly, though I readily admit the margin was of the narrowest.

34 Hillsdale Ave., W.
Toronto 12, Ontario

We have a hunch Mr. Jones will like you!—Rap.

The MAN From TOMORROW (Concluded from page 142)

You bring us space travel in 1961? Not before, but after 1960! You *are* optimistic. No *man-made* rocket on the moon? Then you mean there *is* a non-man-made rocket there? The flying saucers are real, interplanetary, based on the moon, and our government will announce that? Move over, Carmichael, you've got a rival! But no, Miller isn't any more documented than Palmer.

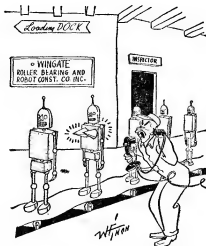
Kidding aside, Max, I mean no offense. I merely want to point out that "let's give the Man From Tomorrow a fair chance!" Certainly he's not documented. He's *guessing*. From both known facts, and through straight intuition. What he's trying to do is see how high a percentage of

correct hits he can make on predictions that don't *cheat*.

And lastly, maybe he's trying to tell you something.

Lots of people think the government is trying to prepare the people for just such an announcement concerning flying saucers. And other world beings. And that they're here. The Man From Tomorrow says they are NOT. Look what they did to pooh-pooh the recent sightings in Japan—to the enraged discomfiture of the pilots who saw them, and tracked them on radar, and checked with a good number of other observers whose observations were entirely independent. No, the government is like Lt. Bossicoe. They are taking a *stand*, an incredible one.

It makes us wonder.



"Fire that wise guy on the assembly line."



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Scribe X.N.K.

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San Jose, California

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Name.....

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(AMORC)

personals

For sale: FATE V 1 #1—\$2; V 3 #5 & 8, V 4 #3 & 7, V 5 #1 & 2—50c; good condition. Books with d/w: The Best of stf '49 & '50—\$2; Dreadful Sanctuary (Russell)—\$2; Takeoff (Kornbluth)—\$2; Travelers of Space and Time—\$3; following for \$1.50 each: "Pirates of Venus," "War Lord of Mars," "Thuvia, Maid of Mars," "Gods of Mars" (all by Burroughs); "Robur the Conqueror" (Verne); "Solution T-25" (DuBois); "The Humanoids" (Williamson); "The Island of Captain Sparrow" (Wright). Subject to prior sale. James Brook, 11 Cranberry St, Brooklyn 2, N. Y. . . . *Will sell or trade: SS, Dec '52; FA, June & Aug '52; AS, Jul & Oct '52; SS, Nov '51. Also have assortments of postage stamps and stf & horror comics. Want: OW 1, 2, 3, 6, 7, 8, 9, & 12; Merritt PBs "Moon Pool," "Metal Monster," "Ship of Ishtar," "Fox Woman," "Creep, Shadow, Creep" and PB "The Flying Saucers Are Real." Jerry Hopkins, 15 Friends Ave., Haddonfield, N. J. . . . Comic books wanted: Weird Fantasy—1st 2 issues plus Nov-Dec '50, May-June '51, Nov-Dec & Sept-Oct '52; Weird Science—1st 5 issues plus Sept-Oct '52; all issues of Pogo preceding July-Sept '52; 1951 Tales of Terror (25c*

*comic). Must be in good condition. Will buy, or have the following comic books in good condition to trade: Adventures Into the Unknown #18, Amazing Adventures #4, Black Cat Mystery #33, Flash Gordon #4; Forbidden Worlds #1; Princess of Mars; Rocket to the Moon; When Worlds Collide; Tom Corbett #2; Witchcraft #2; Unseen #5. Want to correspond with fans 14-16 years old. Have 1926 edition of "Tarzan and the Ant Men," in poor condition, will swap for best offer. Bobby Steward, Rt 4, Box 8, Kirbyville, Tex. . . . *Would like to correspond with any and all fans, particularly any in Mexico. Would also like to know if there are any other fans in Goshen. Sharon Trimmer, 505 Center St, Goshen, Ind . . . All San Francisco fans interested in joining a new club called "The Faceless Ones" phone Bob Steward, Mission 7-4072, or drop in at 274 Arlington St, San Francisco, Calif . . . New fanzine just out—The Barsoomian—bi-monthly devoted entirely to E. R. Burroughs. Just 20c a copy. Joseph W. Miller, 749 Merchants Rd, Rochester, NY . . . A copy of "Stf Trader" will be sent to any interested fan. A tradezine for collectors and sellers. Just a card to K. Martin Carlson, 1028 Third Ave**

South, Moorhead, Minn . . . *Would like to trade back issues of Reader's Digest, Coronet, Westerns and Detectives (PBs) for stf mags in average condition. Prefer OW. Jerry F. Viles, R #1, Heiskell, Tenn . . .* Wanted: 1st issue of Brevizine. Will pay cover price or over if necessary. Also want OW #3 in mint or excellent cond. Will pay 50c. Tom Piper, 464 19th St, Santa Monica, Calif . . . *Will trade "The Best of Stf" (Conklin) for back issues of OW, Madge & Galaxy. Also have PBs "The Day After Tomorrow" and "When Worlds Collide" for the 1st 2 issues of Space Stories. Henry Pasniewski, 35 E. 11th St, Bayonne, N. J. . . .* DESTINY: Earl Kemp & Malcolm Willits; 25c; published quarterly. The Winter issue (#7) contains material by Kemp, Powlesland, Bloch, Briney, and others. DESTINY, 3477 North Clark Street, Chicago 13, Ill. or 11848 S E Powell Blvd, Portland 66, Oregon . . . *For sale: issues of aSF '47 to '49 at 50c, 1950 to date at 35c; All Galaxy & OW and several Galaxy Novels at 35c. Perfect or near perfect. 20% discount with 12 or more mags. H. Malamud, Box 24, College Park, Maryland . . .* Wanted: 1st 4 Galaxy and any Marvel S-F (digest size). Must be perfect condition. Send price and name to Paul Robbins, 8570 Whitworth Ave, Los Angeles 35, Calif . . . PENDULUM—quarterly; Pendulum Press, 610 Park Place, Pittsburgh 9, Pa; 15c, 4/50c; edited by Bill Venable & Donald Susan; mimeographed; contains articles, columns and features . . . For sale: stf

& fantasy mags, scattered copies from '41, aSF nearly complete from '46, all nearly complete from '48. Single issues at cost, liberal discount for quantity purchases. Most good condit., all readable. Copies with torn covers, etc. free to anyone buying complete year. Send for list of prices and condit. Also list of 30 PBs and 30 books. Clayton Hamlin, Jr., Unity, Maine . . . VANATIONS—Bi-monthly; mimeographed; 28 pages; articles, poetry, features and columns; price is whatever you think the magazine is worth; Norman G. Browne, 13906 101A Ave, Edmonton, Alta, Canada . . . For sale: "Science-fiction Omnibus," never-read, fine condit., no d/w, \$2.95; "Astounding S-F Anthology," d/w, fine condit., \$3.95; "Illustrated Man," no d/w, \$2.50; Galaxy V 1 #1, \$1; Fantastic V 1, #1, 50c; PBs, brand new, never read, 35c—"After Many a Summer Dies the Swan," "Devil in Velvet," "The Disappearance," "Timeless Stories," "Beyond the End of Time," "The S-F Galaxy," "In the Grip of Terror," "Odd John," "Four Sided Triangle," "City in the Sea"; for 25c: "The Martian Chronicles," "The Man Who Sold the Moon," "The Green Hills of Earth," "Day After Tomorrow," "Illustrated Man," "Werewolf of Paris," "The Big Eye," "Rogue Queen," "Shot in the Dark," "Day of the Triffids," "Donovan's Brain," "Dragon's Island," "What Mad Universe," "Gladiator," "Miracle on 34th Street," "Behind the Flying Saucers," "The Flying Saucers are real," "1948"! For 10c: "Yni-



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No. 15—JAMES MCCONNELL

(Concluded from page 2)

think McConnell would approve of it. Rather, I'll tell you about his trip to Mexico this summer. Back in June of 1952, with friends Chad Oliver and his (now) wife and other good archeologists, he headed for Durango, Mexico. While the rest of the group was out discovering relics of ancient man, McConnell went out into the wilds by himself to discover relics of modern man. He lived with a group of the Southern Tepehuan tribe in the pretty, malaria-infested little valley of Xoconostle for a few weeks doing psychological research on the Indians. His friends were very happy to see him go out into the mountains because they never expected him to return and they had high hopes of being able to divide up his loot at his demise. Most of the time he didn't think he'd return either, for the na-

tives were reputed to be a rather unfriendly group (unfriendly enough to murder his guide, one of their own people, that August). But they were quite friendly and cooperative towards McConnell and he got some pretty good research done, saw some rugged but beautiful country and has found a refuge to escape to when the atom-bombing begins. They'll never find him in Xoconostle!

He also got some nice ideas for sf stories there (not including *GAME OF WHITE* which was already written). So if you read something of his having a primitive background or an archeologist for a protagonist, you'll know where he got the idea.

He is my favorite author (except when I read what he writes) and is a pretty good kid.

Sincerely,

James McConnell

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